



DEPARTMENT OF DEFENSE

AUDIT REPORT

DUAL-SOURCE PROCUREMENT TECHNIQUES

No. 88-163

June 7, 1988

*Office of the
Inspector General*





INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202

June 7, 1988

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER)
ASSISTANT SECRETARY OF DEFENSE (PRODUCTION AND
LOGISTICS)
ASSISTANT SECRETARY OF THE ARMY (FINANCIAL
MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL
MANAGEMENT)
COMPTROLLER OF THE AIR FORCE

SUBJECT: Report on the Audit of Dual-Source Procurement
Techniques (Report No. 88-163)

This is the final report on the Audit of Dual-Source Procurement Techniques. The Contract Audit Programs Division made this audit from January 1986 to April 1987. The overall audit objective was to determine whether dual-source procurement techniques were achieving increased competition leading to greater economies and efficiencies in the procurement process. -

This report was repackaged as a result of comments received in response to the draft report. The comments indicated that portions of the report were misinterpreted by the addressees and that the report did not clearly present the overall audit conclusions. We have clarified portions of the report and reversed the order of the audit findings so that our most fundamental issue is addressed first.

Dual-source procurement techniques are providing increased competition. Dual sourcing is a viable technique for moving away from sole-source procurements through the life of a program. However, technical guidance, direction, and execution must be improved before we can determine the savings achievable through the use of dual-source procurement techniques. The methods used by the Military Departments to perform cost-benefit analyses of dual-source procurements do not consider all pertinent costs and overstate potential savings to the Government.

Another significant, subsidiary issue to dual sourcing is whether or not the technique results in "adequate price competition," within the meaning of the Federal Acquisition Regulation, so that the Government can rely on the prices to be fair and reasonable. We found that dual-source procurement techniques usually did not result in adequate price competition. The results of the audit are summarized in the following paragraphs, and the details, together with audit recommendations, are contained in Part II of this report.

The methods used by the Military Departments to perform cost-benefit analyses of dual-source procurements did not consider all pertinent costs and overstated potential savings to the Government. As a result, the value of dual sourcing as a procurement method was overstated, and actual savings from dual sourcing could not be determined. We recommend that the Assistant Secretary of Defense (Production and Logistics) issue a dual-source policy statement that establishes standard procedures for performing cost-benefit analyses and for monitoring and controlling dual-source procurement costs (page 5).

Dual-source procurement techniques usually did not result in adequate price competition as defined in Federal Acquisition Regulation 15.804.3. However, contracting officers determined that adequate price competition existed and they exempted contractors from the provisions of Public Law 87-653, Truth in Negotiations Act, when dual-source procurements were made. A review of 38 dual-source acquisitions revealed that adequate price competition did not exist for 30 acquisitions, valued at \$8.8 billion. As a result, the contracts were improperly exempted from the provisions of the Truth in Negotiations Act. We recommended that the Assistant Secretary of Defense (Production and Logistics) instruct the Services to obtain certified cost or pricing data and to include the defective pricing clause in all pricing actions where the award is split between the offerors. We also recommend that the Defense Federal Acquisition Regulation Supplement, Part 17, be expanded to include a section on dual sourcing (page 13).

On January 5, 1988, a draft of this report was provided to the Assistant Secretary of Defense (Comptroller), the Assistant Secretary of Defense (Production and Logistics), the Assistant Secretary of the Army (Financial Management), the Assistant Secretary of the Navy (Financial Management), and the Comptroller of the Air Force for comment. In February, we contacted each of these offices to determine the status of any comments. In all cases, we were informed that comments would be forthcoming by March 18, 1988, 2 weeks after the 60-day comment period required by DoD Directive 7650.3. At the same time, we informed all addressees that final report processing would begin no later than March 18, 1988. However, because of the importance of the issues involved, and at the request of the responding parties, we agreed to wait until all comments were received. Final report processing began on May 3, 1988. Comments were received from the Assistant Secretary of Defense (Production and Logistics) on May 12, 1988, about 9 days after final report processing began. The Assistant Secretary's comments are included as Appendix G. The Director, U.S. Army Contracting Support Agency commented for the Army. His comments were dated March 17, 1988, and are included as Appendix H. The Navy's comments were provided by the Under Secretary of the Navy. His comments were dated April 14,

1988, and are included as Appendix I. The Deputy Assistant Secretary of the Air Force (Acquisition Management and Policy) commented for the Air Force. His comments were dated March 28, 1988, and are included as Appendix J.

The Assistant Secretary of Defense (Production and Logistics) and Service respondents concurred with the recommendations to issue a policy directive that establishes standard procedures for performing cost-benefit analyses and for monitoring and controlling dual-source procurement costs (Recommendation A) and to provide additional guidance in the Federal Acquisition Regulation (Recommendation B.2). The action taken or planned on these two recommendations appears to be adequate. However, since no completion dates were provided, we request the Assistant Secretary of Defense (Production and Logistics) to provide us with projected completion dates for the proposed policy guidance referred to in the response to Recommendation A, the "review of coverage of dual-source competition in the DFARS" (Recommendation B.2), and any proposed DFARS changes (Recommendation B.2). All respondents nonconcurred with Recommendation B.1, to instruct the Services to obtain cost or pricing data and include the defective pricing clause in all pricing actions where the award may be split between the offerors. The Assistant Secretary of Defense (Production and Logistics) believed that it was not appropriate for DoD to make this decision or to issue such an instruction because it is a contracting officer's decision. The Services believed that dual sourcing resulted in competitive prices that did not require certified cost or pricing data to determine price reasonableness. The Navy and Air Force stated that the audit conclusions did not directly relate to the audit objectives. Also, the Navy believed that the draft report did not present an accurate and objective assessment of the value of dual sourcing. The Navy recommended that the report not be issued. As a result of the Services' comments, we have clarified portions of the report and reversed the order of the audit findings. We responded to all comments that were not directly related to the audit recommendations in Appendix K.

DoD Directive 7650.3 requires that all recommendations be resolved within 6 months of the date of the final report. In order to comply with this directive, we request that all addressees provide us a final position on the recommendations addressed to them within 60 days of the date of this report. These comments should indicate concurrence or nonconcurrence with the results of review and each of the recommendations as applicable. For those recommendations with a position of concurrence, describe the actions taken or planned, completion dates of actions already taken, and the estimated dates of planned actions. If appropriate, please describe alternative actions proposed to achieve the desired improvements. For those positions of nonconcurrence, please state the specific reasons

for the position taken. This report contains no monetary benefits.

The courtesies extended to the staff during the audit are appreciated. If you wish to discuss this final report, please contact Mr. Paul J. Granetto at 693-0573.

Stephen A. Trodden
Assistant Inspector General
for Auditing

cc:

Secretary of the Army
Secretary of the Navy
Secretary of the Air Force
Director, Defense Logistics Agency
Director, Defense Contract Audit Agency
Director, Defense Acquisition Review Council

REPORT ON THE AUDIT OF DUAL-SOURCE

PROCUREMENT TECHNIQUES

TABLE OF CONTENTS

	<u>Page</u>
TRANSMITTAL MEMORANDUM/EXECUTIVE SUMMARY	i
PART I - INTRODUCTION	1
Background	1
Objective and Scope	2
Prior Audit Coverage	3
PART II - FINDINGS AND RECOMMENDATIONS	5
A. Cost-Effectiveness of Dual Sourcing	5
B. Determination of Adequate Price Competition	13
APPENDIX A -Glossary of Terms	33
APPENDIX B -Analysis of Investment Costs	37
APPENDIX C - Review of Economic Analyses and Primary Reasons for Establishing the Additional Sources of Supply	39
APPENDIX D - Compendium of Federal and Defense Acquisition Regulations Applicable to Dual-Source Procurements	41
APPENDIX E - List of Contracts that were Classified as Based on Adequate Price Competition	45
APPENDIX F - Contracts Misclassified as Based on Adequate Price Competition	47
APPENDIX G - DoD Comments	49
APPENDIX H - Army Comments	51
APPENDIX I - Navy Comments	53
APPENDIX J - Air Force Comments	67

APPENDIX K – Additional DoD and Navy Comments Not Directly Related to the Report Findings	73
APPENDIX L – Activities Visited	79
APPENDIX M – Final Report Distribution	83
APPENDIX N – Report of Potential Benefits	85

Prepared by:
Contract Audit Programs Division
Project 6CD-036

REPORT ON THE AUDIT OF DUAL-SOURCE
PROCUREMENT TECHNIQUES

PART I - INTRODUCTION

Background

With growing austerity pressures from the Administration, Congress, and the general public, DoD decision makers are under a mandate to use scarce resources wisely. It is a widely held belief that competition can significantly reduce the cost of acquiring major weapon systems. In 1965, the Secretary of Defense reported that the General Accounting Office had evidence to indicate that competition reduced the price of contracts by 25 percent. Although the validity of this percentage has often been questioned, it has also been commonly used by the advocates of competition to justify the establishment of additional suppliers.

Critics of the DoD procurement process have repeatedly expressed displeasure at the manner in which major weapon systems were acquired. The typical scenario usually involved intense competition among defense contractors for the right to develop the system. However, once the development work was completed, and if the contractor was successful, all remaining follow-on production contracts, including spares and repair parts, were negotiated on a sole-source basis with the system's developer. The principal problem with this process was that the costs incurred by the Government during production usually accounted for about 90 percent of the total value of the program. Skeptics believed that too many defense contractors were more than willing to exploit the advantages of their sole-source position.

Dual sourcing, for the purpose of this report, is defined as a procurement technique wherein two or more sources responded to a Government solicitation for a total requirement that was intended to be split among the sources, with the larger share usually going to the lower priced supplier. The requirement, for purposes of our definition, did not have to be split in each year. For example, the SSN 688, a submarine acquisition program, is considered to be dual sourced for purposes of this definition, yet in several individual years the total award was given to one shipyard. A Glossary of Terms used in this report is included as Appendix A.

The Grace Commission, politicians, and defense procurement critics agreed that the degree of competition in the production phase of the acquisition programs could be increased by expanding the use of the dual-source procurement technique. It was felt that by maintaining at least two sources of supply throughout this phase, the benefits of competition would take effect and

result in lower contract prices. These actions culminated with the passage of the Competition in Contracting Act of 1984. Before enactment of the Competition in Contracting Act, DoD used the dual-source procurement technique only when it served the interest of national defense and industrial mobilization. One of the significant features of the 1984 Act was that it clearly required DOD to establish more than one source of supply if it would increase or maintain competition and would likely result in reduced overall costs for acquisition or for anticipated acquisition.

Researchers have made numerous attempts to quantify the economic benefits of using the dual-source procurement technique. Unfortunately, these studies have produced conflicting and often inconclusive results. Proponents of this technique argue that there is a discernible drop in unit prices whenever another source enters the program as a competitor. They basically attribute this price decrease to competitive pressures that force the initial source to become more efficient or accept lower profits. Other researchers argue that there is no accurate way to forecast the economic benefits of dual sourcing; that it adds to total life-cycle costs as often as it produces savings; and that the practice of guaranteeing two contractors a part of every award is conducive to price gaming and actually is an impediment to competition.

Objective and Scope

Our overall objective was to determine whether dual-sourcing procedures were achieving an increased level of competition in the DoD procurement process. We focused on whether DoD policy and guidance were adequate, Military Department policies and guidance were consistent with each other, and dual-source strategies were effective.

We started with the 102 major acquisition programs that were shown on the Selected Acquisition Report dated December 31, 1985. The Army, Navy, and Air Force competition advocates identified 30 of these 102 programs as being or planned to be dual sourced. Development costs for these 102 programs were estimated at \$113 billion and production costs at \$651.2 billion. The average life of a program was 15 years, the average development cost was \$1.1 billion, and the average production cost was \$6.4 billion. We reviewed each program to determine the extent to which the dual-source procurement technique was being used by the Services. We randomly selected 23 of the 102 programs listed in these reports for detailed analysis. Sixteen were from the 30 programs identified as being dual sourced or planned to be dual sourced. Seven were from the remaining 72 nondual-source programs. Costs for these 23 programs were estimated at \$26.8 billion for development and \$192.3 billion for production. Production contracts in these

23 programs totaled \$30 billion as of September 30, 1986. Contracts classified as based on adequate price competition totaled \$11.5 billion.

We examined official files for these 23 programs and for the 124 related support, development, and production contracts, totaling \$34.4 billion, to determine the extent of dual sourcing; the costs and benefits associated with dual sourcing; and if dual sourcing resulted in effective price competition. The contracts were issued by 10 Army, Navy, and Air Force procurement offices during the period July 1975 to September 1986. We evaluated the limited amount of policy and guidance on dual sourcing to see whether standard procedures existed to determine when it was appropriate to use and continue to use this technique; to perform a valid cost-benefit analysis including all investment costs; to accurately report savings; to split awards; to determine whether adequate price competition existed; and to provide the Government with protection under Public Law 87-653, Truth in Negotiations Act. Our audit was made at the Government activities and contractors listed in Appendix K.

This economy and efficiency audit was made from January 1986 to April 1987 in accordance with generally accepted government auditing standards.

Prior Audit Coverage

General Accounting Office (GAO) Report No. GAO/NSIAD-84-111, "Cost Effectiveness of Dual Sourcing for Production Price Competition is Uncertain" (OSD Case No. 6369), dated August 31, 1984, concluded that the cost-effectiveness of dual sourcing for production price competition was uncertain. GAO observed that dual sourcing appeared to constitute a small portion of DoD's major hard goods procurement; that dual sourcing was not employed solely or primarily for the purpose of price competition; that existing statutes did not clearly authorize dual sourcing during production primarily for price competition; and that dual sourcing was not adequately addressed in official DoD policy and guidance. It also found that there was insufficient evidence to arrive at a conclusion regarding the economic effectiveness realized through dual sourcing. The GAO report had conclusions and observations but made no recommendations to DoD. In regard to some of the GAO observations discussed above, this report constitutes a repeat of the GAO observations.

PART II - FINDINGS AND RECOMMENDATIONS

A. Cost-Effectiveness of Dual Sourcing

FINDING

The methods used by the Military Departments to perform cost-benefit analyses of dual-source procurements did not consider all pertinent costs and overstated potential savings to the Government. This condition occurred because there was a lack of standard policy and guidance on how to perform cost-benefit analyses, and the Military Departments did not offset investment costs against claimed benefits. As a result, the value of dual sourcing as a procurement method was overstated, and actual savings from dual sourcing could not be determined.

DISCUSSION OF DETAILS

Background. Federal Acquisition Regulation (FAR) 34.005-1 requires that the program manager, throughout the acquisition cycle, promote full and open competition and sustain effective competition between alternative major systems and concepts as long as it is economically beneficial to do so. DoD Directive 4245.9, "Competitive Acquisitions," requires that the program manager use a cost-benefit analysis to support the economic decision to establish and continue maintaining price competition.

The purpose of conducting an analysis of costs and benefits before making the dual-source decision is to determine whether dual sourcing is economically beneficial. One key element of this decision is to determine if it is probable that the nonrecurring costs associated with setting up the second source (investment cost) will be offset by reduced unit costs on future procurements. The most significant nonrecurring costs that are identifiable with setting up another source of supply are contractor research and development, technology transfer, qualification of the second source and its suppliers, additional tooling and test equipment, and Government and contractor management. It is important that these costs are carefully estimated, otherwise the program manager may make an incorrect decision on whether or not to establish a second source by understating or overstating costs.

Before making the dual-source decision, it is important to give appropriate consideration to other significant factors that bear on costs and benefits. Adjustments should be made for the time value of money because several years may elapse between the time "up front" investments are made and the time when the second source can effectively compete. An adjustment should also be made for the effects of learning. It is commonly accepted that a contractor's unit price will drop each year by simply

producing more units. For example, the U.S. Army's sole-source projections for the HELLFIRE program indicated that the average unit prices would decrease from \$96,000 in 1982 to \$36,000 in 1986 because of learning.

After the two sources of supply are established and are coproducing, it is important that costs are continually monitored to determine program savings and to determine whether it is economical to continue the second source. Also, a cost-benefit analysis can be used to identify additional costs that may not have been identified before making the dual-source decision. These costs include premium payments (costs above the lowest evaluated price) that are made to sustain more than one source.

The importance of supporting a dual-source decision with a sound economic analysis cannot be overstated. Dual sourcing typically requires an average investment of \$179 million, and an incorrect decision could prove costly to the Government. The average investment figure was derived by analyzing data supplied by program managers in response to a questionnaire and by verifying data from contract files.

Extent of Cost-Benefit Analysis. Decisions to introduce more than one source of supply into major acquisition programs were often not supported by an effective analysis of potential costs and benefits either before the decision was made or after the procurement had been completed. Of the 23 programs we examined, only 11 had some type of economic analysis to support the decision to dual source or not to dual source. Eight of the 16 dual-source programs had some type of economic analysis to support the decision to dual source, while only 3 of the 7 non-dual-source programs had some type of economic analysis to support the decision not to dual source. The results of our review are summarized in Appendix C. The principal reason given by contracting officials for not performing an analysis of costs and benefits was that the dual-source initiatives were either directed by higher authority or were required for industrial mobilization base purposes. We were also informed that cost-benefit analyses were not conducted for many of the nondual-source programs because they were high-technology systems with prohibitive start-up costs for a second producer.

Part 34 of the FAR was changed in early 1986 to require agencies to ". . . sustain effective competition between alternative systems concepts and sources for as long as it is beneficial." This implies that a cost-benefit analysis is required. DoD Directive 4245.9, dated August 17, 1984, requires program managers of major acquisitions to use a cost-benefit analysis to support the economic decision to establish and continue maintaining price competition. As of November 1987, DoD had not

issued any guidance, however, on how to conduct such cost-benefits analyses.

Program Savings. The Military Departments have claimed in their annual reports to the Congress that dual-source competitions resulted in substantial savings to the Government; however, these claims lacked credibility. Significant dual-source investment costs were routinely excluded from such computations, and inaccurate methodologies were used to compute net cost benefits. We estimated that when all key factors are taken into account for the 16 dual-source programs in our review, DoD would have to recover investment costs of \$2.2 billion before any valid net cost benefits could be realized (see Appendix B). Program managers generally did not take into account front-end investment costs, effects of learning, program losses, and the time value of money when claiming program savings for any particular year. Examples of how the Services were computing program savings are presented below. Other systems used similar methods.

SPARROW. The Navy claimed in its FY 1986 Competition Advocate Report to Congress that competition had resulted in savings of \$339.2 million for this program in the FY 1982 to FY 1986 time frame. The Naval Air Systems Command computed this figure by using the following procedures. The Command:

- computed an average unit price of the missile tender two earlier sole-source contracts awarded to Raytheon, the prime contractor, in FY 1980 and FY 1982 (\$193,400 per unit), computed the average unit price of the missile for two "competitive" contracts awarded in FY 1983 and FY 1984 to the same contractor (\$138,100 per unit);

- subtracted the FY 1983 and FY 1984 "competitive" unit price from the FY 1980 and FY 1982 sole-source unit price to determine an average savings per unit "attributable to competition" of \$55,000 (\$193,400 minus \$138,100 equals \$55,300 rounded to \$55,000 per unit); and

- multiplied the "savings" attributable to competition of \$55,000 times the total number of units contracted from FY 1982 to FY 1986 to arrive at an estimated total savings attributable to competition of \$339.2 million (\$55,000 times 6,168 units equals \$339,240,000 rounded to \$339.2 million).

This methodology ignored the contracts awarded to General Dynamics, the second source, at substantially higher unit prices, and only considered 4 of 11 contracts awarded for this program. Price reductions due to economy of scale and normal effects of learning were also not recognized. It also ignored significant second-source investment costs of \$338.4 million. These costs were: nonrecurring costs that were necessary to set up General

Dynamics as the second source; the time value of money that is applicable to these costs; and premium payments that were made to keep two contractors involved in the program. Had the second-source investment costs of \$338.4 million been offset against this figure, the program would have barely broken even. Had the methodology been corrected to consider all 11 of the previously awarded contracts, price reductions due to economy of scale, and normal effects of learning, the Navy would have shown a substantial loss due to dual sourcing over these four years rather than a savings.

SSN-688. In its FY 1986 Competition Advocate Report to Congress, the Navy claimed that this program saved an estimated \$255 million. The Navy Sea Systems Command derived this figure by subtracting the total value of the contracts in this program from the President's budget submission (\$2.685 billion minus \$2.43 billion equals \$255 million). This procedure was radically different from the method used by the Naval Air Systems Command to compute benefits for the SPARROW Program. It did not consider price reductions that would accrue to the Navy because of economy of scale and the normal effects of learning. It also did not consider the possibility that the budget submission itself was inflated.

Another flaw in the method is that it did not consider the added costs of contractor cost overruns. Each of the primary contractors in this program have incentive-type contracts with the Government that are subject to a change in contract price depending on contractor performance. For the 3-year period ending FY 1986, these two contractors had collectively overrun their contracts by \$643 million. Because the Government was bound by the contract to bear 50 percent of the added costs, we calculated that any true savings figure for this program would have to offset at least the \$321.5 million Government share of the overrun.

HELLFIRE. The Army claimed in its FY 1985 Competition Advocate Report to Congress that the FY 1985 HELLFIRE dual-source procurement resulted in competitive savings of \$20.3 million. The U.S. Army Missile Command calculated this amount by comparing the actual contract award amounts to the FY 1985 sole-source projection. A closer examination of the computation procedure disclosed several deficiencies.

As part of a baseline cost estimate that was prepared to support the Army's decision to establish two sources of supply, an analysis was made to see what it would cost the Army to produce in a sole-source versus a dual-source environment. The analysis showed that the dual-source initiative would be cost-effective. The dual-source portion of the analysis appropriately considered second source nonrecurring costs, offsets for the time value of money, and adjustments for the effects of learning. In computing

the benefits for FY 1985, however, the Army took the total value of the two contracts and compared it to the sole-source projection for that year. Although the Army's method had positive attributes, it also contained two flaws that are discussed below. The following facts are presented from the Army analysis.

	<u>FY 1984 *</u> (millions)	<u>FY 1985</u> (millions)
Sole Source Projected Costs	\$187.3	\$210.9
Actual Costs	<u>198.8</u>	<u>190.6</u>
Difference	\$ 11.5	\$ 20.3

* First split award buy.

In calculating the estimated savings for the FY 1985 Competition Advocate Report to Congress, the Army ignored the \$11.5 million loss that occurred in FY 1984. The Army also excluded significant investment costs (\$43.5 million) previously recognized in the dual-source cost estimate. Had all costs been appropriately considered, the Army could not have claimed any savings but rather a loss during this period.

PEACEKEEPER. The Air Force Systems Command, Ballistics Missile Office, estimated savings of about \$58.5 million for the Reentry Vehicle portion of the program. The following procedures were used.

- Sole-source costs were computed by multiplying FY 1984 unit prices of \$381,256 times the total quantity procured in FY 1985 and FY 1986 of 298 units to arrive at a total price of \$113,614,288.

- Dual-source costs were computed by multiplying the average unit prices submitted by AVCO and General Electric against the total number of items acquired from each firm in FY 1985 and FY 1986. These computations are shown below.

	<u>Total Price 1/ AVCO</u>	<u>Total Price 2/ General Electric</u>	<u>Total Price</u>
FY 1985	\$21,034,593	\$23,815,675	\$44,850,268
FY 1986	<u>5,040,952</u>	<u>5,271,960</u>	<u>10,312,912</u>
Totals	\$26,075,545	\$29,087,635	\$55,163,180

1/ Based on 209 units.

2/ Based on 89 units.

- Estimated savings were calculated by subtracting the total dual-source price (\$55,163,180) from the projected sole-source price (\$113,614,288) to arrive at a difference of \$58,451,108.

The methodology was flawed because price reductions due to economy of scale and learning were not considered in the equation. Furthermore, the Air Force did not offset second-source nonrecurring investment costs, time value of money, and premium payments against the claimed savings.

RECOMMENDATION FOR CORRECTIVE ACTION

We recommend that the Assistant Secretary of Defense (Production and Logistics) issue a dual-source policy statement that establishes standard procedures for performing cost-benefit analysis and for monitoring and controlling dual-source procurement costs.

MANAGEMENT COMMENTS

The Assistant Secretary of Defense (Production and Logistics) and all Service respondents concurred with the above recommendation. The Navy, however, in its comments went on to state that:

Although certain cost estimates and savings projections can be made regarding the potential outcome of dual-source programs, in the final analysis, the dual-sourcing decision is made on prudent business judgment after taking into account the various quantitative and qualitative factors relating to a specific program. That judgment has proven correct in those Navy programs selected for dual sourcing. In any analysis the burden should be on those wishing to continue sole-source contracting to clearly demonstrate that sole-source contracting is less costly.

Additionally, both the Assistant Secretary of Defense (Production and Logistics) and the Under Secretary of the Navy made comments which were not directly related to the issues discussed in this report. These comments and our corresponding responses are included as Appendix K.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

We do agree with the Under Secretary of the Navy's comments that the dual-sourcing decision should be made on the basis of sound business judgment. The Under Secretary goes on to state, "That judgment has proven correct in the Navy programs selected for dual sourcing." This is the point where the Under Secretary and

the audit team disagree. We do not believe that the judgment has been proven correct in those Navy programs selected for dual sourcing. We do not believe that it has been proven correct yet for any of the programs selected in our random sample. Concurrently, we do not believe it has been proven incorrect. To reiterate a very important point, "We do not believe that a decision can be made either pro or con on dual sourcing until the appropriate data is independently collected and analyzed." That is the basic thrust of this finding.

We agree with the Under Secretary's statement that "In any analysis the burden should be on those wishing to continue sole-source contracting to clearly demonstrate that sole-source contracting is less costly." We did not recommend that the Navy or DoD should continue sole-source contracting.

This report does not attempt to disprove that dual sourcing is cost-effective, an implication underlying most of the Navy's comments. What we are saying, however, is that "prudent business judgment" requires that all investment costs, second-source start up costs, second-source administrative costs, the time value of money, and any other costs related to bringing a second source to competitive status be considered in making the decision to dual source. This finding of the report demonstrates that the methodology used to make dual-source procurement decisions are inconsistent and inadequate.

B. Determination of Adequate Price Competition

FINDING

Dual-source procurement usually did not result in adequate price competition as defined in Federal Acquisition Regulation 15.804.3. A review of 38 dual-source contracts that were classified by contracting officers as being based on "adequate price competition" revealed 30 contracts in which adequate price competition did not exist. This condition occurred because there was a lack of standard policy and guidance on dual sourcing and because the Military Departments did not use appropriate Federal Acquisition Regulation criteria. As a result, 30 contracts, totaling \$8.8 billion, were misclassified as being based on adequate price competition and were improperly exempted from the provisions of the Truth in Negotiations Act.

DISCUSSION OF DETAILS

Background. Official DoD policy, as expressed in Federal Acquisition Regulation (FAR) 7.102, is to acquire all goods and services on a competitive basis to the maximum extent practicable. To increase the percentage of procurement dollars competed each year, DoD has established policies and procedures to develop more than one procurement source and promote full and open competition. Increasing competition is a very laudable objective. However, competition and price competition are not the same. It is possible to have two or more suppliers for a product and still not have price competition. This occurs when alternate sources are established for reasons other than price, and when contractors are either unwilling or incapable of competing any portion of the requirement. In these types of situations, it is unwise for the Government to assume that the prices are reasonable without additional insight into the basis of the prices.

Although competition is one of the most frequently used terms in the Government, the term has different meanings to different people. The FAR provides three distinct definitions of competition. They are full and open competition, adequate price competition, and effective competition. Dual sourcing often does not meet any of the three definitions of competition. These terms are discussed below.

Full and Open Competition. FAR 6.003 states that when used with respect to a contract action, full and open competition ". . . means that all responsible sources are permitted to compete."

Adequate Price Competition. The circumstances under which a contracting officer can make a determination that price was based on adequate price competition are explained in FAR 15.804.3, which states, in part, that:

Adequate price competition. (1) Price competition exists if—

- (i) Offers are solicited;
- (ii) Two or more responsible offerors that can satisfy the Government's requirements submit priced offers responsive to the solicitation's expressed requirements; and
- (iii) These offerors compete independently for a contract to be awarded to the responsible offeror submitting the lowest evaluated price.

(2) If price competition exists, the contracting officer shall presume that it is adequate unless—

- (i) The solicitation is made under conditions that unreasonably deny to one or more known and qualified offerors an opportunity to compete;
- (ii) The low offeror has such a decided advantage that it is practically immune from competition; or
- (iii) There is a finding, supported by a statement of the facts and approved at a level above the contracting officer, that the lowest price is unreasonable.

(3) Price is "based on" adequate price competition if it results directly from price competition or if price analysis alone clearly demonstrates that the proposed price is reasonable in comparison with current or recent prices for the same or substantially the same items purchased in comparable quantities terms, and conditions under contracts that resulted from adequate price competition.

A determination of adequate price competition exempts the contractor from Public Law 87-653, Truth in Negotiations Act. By making this determination and granting this exemption, the contracting officer does not have to obtain certified cost or pricing data from the contractor or incorporate the defective pricing recovery clause into the contract.

The Truth in Negotiations Act requires the submission of cost or pricing data and certification of their accuracy, completeness, and currency for the award of any negotiated contract expected to exceed \$100,000. The purpose of the Act is to give the Government and the contractor equal footing in negotiating contract price. An important part of the Truth in Negotiations Act is the defective pricing recovery clause. The Act states that the Government is entitled to a price adjustment on a negotiated contract if the contract cost was increased by inaccurate, incomplete, or noncurrent data. This entitlement is

provided by inclusion in the contract of a defective pricing recovery clause.

Effective Competition. This implies a genuine rivalry between two or more sources. It is defined in FAR 34.001 as a market condition that exists when two or more contractors, acting independently, actively contend for the Government's business in a manner that ensures the Government will be offered the lowest cost or price alternative or best technical design meeting its minimum needs. Effective competition would include not only price competition but might also include design or schedule (who can deliver it faster) competition. FAR 34.005-1 requires that the program manager promote full and open competition and sustain effective competition between alternative major systems and concepts as long as it is economically beneficial to do so. DoD Directive 4245.9, "Competitive Acquisitions," requires the program manager to use a cost-benefit analysis to support the economic decision to establish and continue maintaining price competition.

Because of the distinctions being made between competition and effective price competition, we have included as Appendix D a compendium of the significant FAR and Defense Federal Acquisition Regulation Supplement (DFAR) references applicable to competition.

Extent of Dual Sourcing. The Army, Navy, and Air Force Competition Advocates identified 30 programs from the December 31, 1985, Selected Acquisition Report (SAR) as being, or planned to be, dual sourced. The number of dual-sourced SAR programs as identified by the Military Departments are shown below.

<u>Service</u>	<u>Number of SAR Programs 1/</u>	<u>Dual Sourced 2/</u>	<u>Planned Dual Sourced 3/</u>
Army	23	1	2
Navy	41	7	12
Air Force	<u>38</u>	<u>3</u>	<u>5</u>
Totals	102	11	19

1/Estimated production casts of \$651.2 billion.

2/Estimated production costs of \$103.7 billion.

3/Estimated production costs of \$106.4 billion.

Dual-sourcing initiatives, either ongoing or planned, were a major part of 30 SAR programs and represented about one-third of the total estimated production costs. The Navy used dual

sourcing more than either the Army or Air Force. The Navy's most common use at the major component level was in missile and shipbuilding programs. We selected 23 of the 102 acquisition programs for detailed analysis to learn more about the internal decision-making process and how the programs were administered after the dual-sourcing decisions were made. Our sample included 16 of the 30 programs identified by the Military Departments as being dual sourced or planned to be dual sourced. We selected an additional 7 programs from the 72 programs that were not designated as being dual sourced. The breakdown by Service is shown below.

Sampled Programs

<u>Service</u>	<u>Sample 1/</u>	<u>Dual Sourced 2/</u>	<u>Planned Dual Sourced 3/</u>	<u>Not Dual Sourced 4/</u>
Army	4	1	1	2
Navy	11	6	3	2
AirForce	<u>8</u>	<u>1</u>	<u>4</u>	<u>3</u>
Totals	23	8	8	2

1/Estimated production costs total \$192.3 billion.

2/Estimated production costs total \$97.6 billion.

3/Estimated production costs total \$24.7 billion.

4/Estimated production costs total \$70.0 billion.

We used sampling techniques to select a representative number of programs in each category. This enabled us to draw a firm conclusion on how and why dual-source decisions were made and how they were used for competition purposes. The preponderance of Navy programs in the dual source category was attributed to the fact that the Navy was the leading proponent of this procurement technique.

Policy and Guidance. DoD had not issued any policy or guidance on dual sourcing as of the termination of our field work. Some of the major dual-sourcing policy issues not addressed included when and under what conditions to use dual sourcing, analysis of costs and benefits, determination of adequate price competition, use of Truth in Negotiations Act protection, calculation of program savings, and dual-source procurement strategies. The absence of policy and guidance resulted in a series of actions that did not serve the best interest of the Government and are discussed in detail throughout this report.

The General Accounting Office, in a report published in August 1984 and titled "Cost Effectiveness of Dual Sourcing For Production Price Competition is Uncertain" (GAO/NSIAD-84-111), emphasized the need for uniform dual-source policy and guidance. The DoD response to the report, which was published as part of the GAO report, stated that:

The report has taken two positions, however, that DoD does not agree are practical. It is not practical to conduct further tests of the dual sourcing technique before the Armed Services Procurement Act (ASPA) is amended to authorize dual sourcing solely for the purpose of conducting a price competition. Since the report recognizes the need for clearer authority it would not be prudent for DoD to act without this clarification and run the potential risk of having the basis for excluding the incumbent source in the competition argued in the courts. The other position DoD does not agree with deals with the need, at this time, to formulate additional DoD policy and guidance relative to using the competitive dual source technique in production programs. As mentioned above, when the authority to pursue this technique purely for price competition is approved, it will then be appropriate to set forth additional DoD policy and guidance.

During the course of this audit, we determined that DoD did not issue any new guidance or policy in the area of dual sourcing after August 1984. Only the Air Force System Command, in a publication issued by its Competition Advocate in June 1986, titled "Guidelines for Determining the Use of Competitive Multiple Sources," had issued any type of guidance concerning dual sourcing.

Adequate Price Competition. We found that 30 contracts, valued at about \$8.8 billion, were classified by contracting officials as based on adequate price competition, even though they did not meet the FAR 15.804.3(b) criteria for such a determination. We reviewed files for 38 contracts in which the dual-source contractors were requested to submit price proposals in response to a competitive solicitation. We used the criteria described in FAR 15.804.3(b) for determining whether adequate price competition existed. The results of our review are summarized below.

	<u>Production Contracts</u>		<u>Classified as Adequate Price Competition 1/</u>		<u>Improperly Classified as Adequate Price Competition 2/</u>	
<u>Program</u>	<u>Number</u>	<u>Value (millions)</u>	<u>Number</u>	<u>Value (millions)</u>	<u>Number</u>	<u>Value (millions)</u>
TOMAHAWK	6	\$ 770.6	2	\$ 648.7	2	\$ 648.7
CC-47	9	4,985.6	3	1,499.5	3	1,499.5
SPARROW	10	1,916.1	5	1,095.2	5	1,095.2
FFC-7	12	3,368.5	12	3,365.2	12	3,365.2
SSN-688	12	6,417.1	4	3,453.3	2	1,860.4
LSD-41	1	793.8	1	769.3	0	0
HELLFIRE	8	738.8	6	595.4	2	203.8
PEACEKEEPER	<u>9</u>	<u>349.3</u>	<u>5</u>	<u>99.0</u>	<u>4</u>	<u>90.1</u>
Totals	67	\$19,339.8	38	\$11,525.6	30	\$8,762.9

1/ See Appendix E for details.

2/ See Appendix F for details.

We began with 124 contracts, which we reviewed. Fifty-seven were support or development contracts that were not classified as being awarded on the basis of adequate price competition in accordance with FAR 15.804.3, or, they were production contracts for nondual-sourced systems. The remaining 67 were production contracts that were the subject of this portion of the audit. Of these 67, 29 were not classified as being based on adequate price competition in accordance with FAR 15.804.3. The remaining 38 were classified as being awarded on the basis of adequate price competition. Of the 38, 30 did not meet the FAR 15.804.3 criteria for such a determination. We did not challenge the remaining 8 contracts. Our summary analysis of why we disagreed with the contracting officer's determination of adequate price competition is in the following paragraph.

In 21 of the 30 contracts improperly classified as adequate price competition, the award was not made at the lowest evaluated price. In 23 cases, the second source was either unwilling or incapable of submitting competitive offers at all ranges of the solicitation. In 24 cases, the contractors had received such high guaranteed quantities that the likelihood of competitive pricing was greatly diminished. (For example, in some programs the losing contractor was guaranteed a minimum of 40 percent of a given year's requirement.) The above numbers are duplicative. Some contracts fell into 2 or 3 categories by our analysis.

Since Title 10, United States Code, Section 2306(a), exempts contracts from the Truth in Negotiations Act when a price is

based on adequate price competition, it is critical that the contracting officer make a proper determination. The recognition that a particular acquisition was not based on adequate price competition protects the Government in situations where contractors employ questionable pricing strategies in their attempts to maximize profits.

Some contractors are willing to accept the smaller portion of a split award, especially when the Government guarantees that the award will be split. Contractors can maximize profits by raising prices for the smaller quantity of a split award. Again, in such situations, it is unwise for the Government to assume that prices are reasonable and that adequate price competition exists without some reasonable insight and experience into the basis for the prices.

Contracting officers have sometimes classified awards as based on adequate price competition, even though contractors did not have the facilities to produce at equal levels, were incapable of competing, or were unwilling to compete. The following are examples of dual-source acquisitions where we questioned the contracting officers' determinations that adequate price competition existed.

TOMAHAWK. Contracts for 645 missiles were awarded to two contractors at combined prices of \$648.7 million as shown below. General Dynamics, the initial contractor, had a tremendous learning advantage because it had produced 489 air vehicles compared to only 68 produced by McDonnell Douglas, the second source. The original contractor was also facilitated to produce well above the maximum award quantity level. The price proposals that were submitted in response to the two Government solicitations are listed below.

FY 1985

<u>Percentage</u>	<u>Qty</u>	<u>General Dynamics</u> <u>(millions)</u> <u>1/</u>	<u>McDonnell Douglas</u> <u>(millions)</u>	<u>Difference</u> <u>(millions)</u>	<u>Average</u> <u>(millions)</u> <u>2/</u>
60	180	\$154.8	\$204.9	\$50.1	\$.860
40	120	113.5	148.4	34.9	1.212
100	300	\$268.3	\$353.3	\$85.0	1.011

FY 1986 4/

60	206	\$185.2	\$219.7	\$34.5	\$.899
40	139	135.7	160.3	24.6	1.153
100	345	\$320.9	\$380.0	\$59.1	1.002

1/ General Dynamics submitted an unsolicited price proposal for the entire quantity. The proposal totaled \$193.4 million and averaged \$644,700 per missile.

2/ Average unit prices were based on actual award amounts. Therefore, the figure of \$1.011 million was derived by adding the FY 1985 \$154.8 million General Dynamics proposal to the \$148.4 million McDonnell Douglas proposal and dividing the results (\$303.2 million) by the total quantity procured (300).

3/ Actual awards made. For FY 1985 the total was \$303.2 million while for FY 1986 the total was \$345.5 million. The grand total for the two years was \$648.7 million.

4/ Based on FY 1985 option prices.

A comparison of the price proposals and the difference between proposals at both levels clearly shows that McDonnell Douglas was not in a position to effectively compete with General Dynamics at any quantity level. Also, while McDonnell Douglas lowered its average price for the FY 1986 buy, General Dynamics raised the average price for the FY 1986 buy, resulting in a slight overall price decrease from FY 1985 to FY 1986.

Furthermore, the average unit prices that were proposed by General Dynamics in its unsolicited proposal for the total quantity indicated that the Government did not pay a reasonable price to either contractor in either year. If the Navy had accepted the unsolicited proposal, it had the opportunity to reduce the price paid for the 645 missiles by as much as \$232.9 million. We computed the potential savings of \$232.9 million by multiplying the price per missile from General Dynamic's unsolicited proposal (\$644,700) times the number of missiles procured for both years (645). We then subtracted the

results (\$415.8 million) from the amount actually awarded (\$648.7 million) to get a potential maximum difference of \$232.9 million.

Navy contracting officials declared that the four awards made in FY 1985 and FY 1986 were based on adequate price competition. Therefore, the Government was not protected from overpricing by the Truth in Negotiations Act. Since these contracts were not awarded based on the lowest evaluated price and one contractor had a decided advantage in learning and facilities available for production, a determination should not have been made that the award was made on the basis of adequate price competition.

SPARROW. The FY's 1984, 1985, and 1986 awards of \$1.1 billion for the guidance and control section of the SPARROW missile did not result from adequate price competition. Raytheon, the primary source, had a competitive advantage because it had already produced large quantities of the guidance and control section. Also, General Dynamics, the second source, did not have sufficient production capabilities to meet Government requirements. In FY 1984 and FY 1985, General Dynamics did not submit bids at the quantity level awarded to Raytheon. Going into the FY 1986 annual buy, Raytheon had the advantage of producing more than twice as many items as General Dynamics. If the Navy had chosen to make awards in FY 1985 and FY 1986 at the lowest evaluated price, it could have reduced its contract prices by \$98.9 million as shown on the following chart.

FY 1985

Actual Award	\$447,335,000
Lowest Evaluated Price	
(100 percent to Raytheon)	<u>379,598,355</u> ^{1/}
Premium	\$67,736,645

FY 1986

Actual Award	\$442,196,612
Lowest Evaluated Price	
(100 percent to Raytheon)	<u>411,065,152</u> ^{1/}
Premium	<u>31,131,460</u>

Total Premium Paid FY 1985 and FY 1986	<u>\$98,868,105</u>
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^{1/} Since the actual awards were made at two bid quantities, we had to interpolate to get this figure. For example, in FY 1985 both contractors bid at quantities of 2,800 and 3,340. Since the actual award was made at a quantity of 3,145 guidance systems, we had to convert the Raytheon bid for the two quantities to a bid for the 3,145 quantity.

The FY 1984 buy, highlighted in the chart below, shows a specific example of the price proposals that were submitted at various quantities in response to the Government solicitation.

<u>Quantity</u>	<u>Raytheon (millions)</u>	<u>General Dynamics (millions)</u>
300	\$ 63.5	\$ 59.6
600	99.1	97.4
900	130.4	139.5
1,200	157.6	174.3
1,500	188.9	Not bid
1,800	219.0	Not bid
1,987	234.8	Not bid

The Navy offered an award based on adequate price competition to Raytheon for a quantity of 1,560 systems, even though General Dynamics did not have the capability to produce at that level and did not submit a bid for any quantity above 1,200. Further, the Business Clearance memorandum specified that the Navy had no intention of awarding any portion of this requirement to General Dynamics because of delivery and technical problems the firm experienced in previous contracts.

A review of the pricing history for this item disclosed that the introduction of General Dynamics had no effect on any of the prices submitted by Raytheon. The primary reason for keeping two sources of supply was for the mobilization base. The Naval Postgraduate School also examined the pricing behavior of the contractors in this program. The research findings, which were reported in September 1985, disclosed a repetitive pattern of price gaming. The Navy declared that this was a competitive program even though it was aware of the Navy Postgraduate School's findings. Since Raytheon had a decided advantage in terms of prior production and facilities available for production, a determination should not have been made that the award was made on the basis of adequate price competition.

FFG-7. The Navy established three sources of the FFG-7 class of ship to meet critical delivery requirements. Bath Iron Works Corp. (Bath), the dominant source of this class of ships, had two distinct advantages over the two West Coast shipyard sources. Bath produced the lead ship and was located in an area on the East Coast that gave it a significant advantage in terms of the labor cost to build the ships. This advantage was known by Navy negotiators who were responsible for analyzing contractor proposals and making decisions on contract awards. It appears that the pricing strategy employed by Bath throughout the program

was to submit bids that were priced as closely as possible to its competitors yet remain the low bidder. This is demonstrated by the chart below.

	<u>Bath</u>	<u>Todd Pacific Shipyards Corp., Los Angeles and Seattle</u>
Ships Produced	23	31
Total Value of Awards (billions)	\$ 1.4	\$ 1.9
Price per Ship (millions)	\$62.1	\$62.4

Even though Bath had the lead ship, economy of scale, and labor rate advantages over the other contractors, there was only a minor difference in average unit price among the three sources. Bath's pricing strategy became apparent after a significant percentage of costs were incurred. The series of incentive-priced contracts awarded to Bath were collectively underrun by approximately \$249 million as of December 31, 1986. Because these were all fixed-price-incentive-fee contracts, the net effect of this underrun, as shown in Bath's cost performance reports for each individual contract, was to increase Bath's profits by about \$78 million. Since these contracts were not awarded on the basis of lowest evaluated price and since Bath had such a decided advantage in terms of economy of scale, learning, and overall labor rate, a determination should not have been made that the award was made on the basis of adequate price competition.

CG-47. This program was classified as based on adequate price competition in fiscal years 1984, 1985, and 1986 even though the Navy did not award the contracts based on the lowest evaluated price. At the time the first split award was made in FY 1984, Ingalls Shipbuilding Division (Ingalls), the initial contractor, had a distinct advantage since it had developed and was under contract to produce nine ships. Bath, the second source, had produced one ship. An analysis of the price proposals submitted during these three years follows.

<u>FY 1984</u> (millions)			
	<u>One Ship</u>	<u>Two Ships</u>	<u>Award Amount</u>
Ingalls	\$179.1	\$325.5	\$325.5
Bath	251.2	399.5	<u>251.2</u>
Total			\$576.7

	<u>FY 1985</u> (millions)			
	<u>One Ship</u>	<u>Two Ships</u>	<u>Three Ships</u>	<u>Award Amount</u>
Ingalls	\$228.9	\$426.6	\$628.0	\$228.9
Bath	223.6	364.3	555.0	364.3
Total				<u>\$593.2</u>

	<u>FY 1986 (1985 Option)</u>			
	(millions)			
	<u>One Ship</u>	<u>Two Ships</u>	<u>Three Ships</u>	<u>Award Amount</u>
Ingalls	\$231.8	\$432.8	\$638.0	\$231.8
Bath	208.7	366.0	543.6	366.0
Total				<u>\$597.8</u>

The prices submitted by the contractors in FY 1984 indicated that Ingalls had a distinct advantage in this program and that Bath could not effectively compete. Despite this, Navy contracting officials chose to classify the two-ship award to Ingalls as a competitive buy. However, the one-ship award made to Bath was considered a noncompetitive award and subjected to negotiations and the Truth in Negotiations Act. The Navy paid a premium of \$72.1 million in FY 1984 for this buy (Ingall's one-ship price versus Bath's one-ship price).

Despite the theory that competition will drive a prior sole-source producer's price down, Ingall's price went up in FY 1985 and FY 1986. As pointed out earlier, this behavior was also observed in the FY 1986 proposal from the TOMAHAWK prime contractor (General Dynamics). Bath's prices went down precipitously. Nevertheless, the Navy split the awards and determined that they were based on adequate price competition. By splitting the awards, the Navy paid a premium of \$38.2 million in the FY 1985 procurement (Bath's three-ship proposal of \$555 million subtracted from the actual total award amount of \$593.2) and \$54.2 million in the FY 1986 procurement

(Bath's three-ship proposal of \$543.6 million subtracted from the actual total award amount of \$597.8 million).

Hindsight shows that Bath's pricing strategy was overly optimistic since it was overrunning its four-ship award by about \$87 million as of December 31, 1986. Ingalls, on the other hand, was experiencing a \$34.3 million underrun on its two-ship awards for FY 1985 and FY 1986. Since these contracts were not awarded on the basis of the lowest evaluated price and Ingalls had such a decided advantage in terms of learning, a determination should not have been made that the awards were made on the basis of adequate price competition.

HELLFIRE. The FY 1984 award for this system was determined to have been based on adequate price competition despite the fact that the original intent was to negotiate. The Army performed a "should-cost" analysis of the proposals of both contractors of this system and established a negotiation objective. When both contractors walked out of negotiations and refused to lower their prices, the Army asked for and accepted a best and final offer from both contractors. The total contract award of \$212.1 million (\$113.2 million to Rockwell International and \$98.9 million to Martin Marietta Aerospace) was declared to be based on adequate price competition even though it exceeded the "should-cost" recommendation by \$43.5 million, and despite the fact that each contractor had a guarantee of a 40-percent minimum award from the Army on the first buy and 25 percent thereafter. A comparison of the proposals that were made during this 3-year period follows.

FY 1984
(millions)

<u>Quantity</u> *	<u>Rockwell</u> <u>International</u>	<u>Martin Marietta</u> <u>Aerospace</u>	<u>Difference</u>
1,948	\$ 86.7	\$ 96.8	\$10.1
2,923	118.4	127.3	8.9

FY 1985
(millions)

1,616	\$ 59.5	\$ 56.2	\$3.3
3,232	102.8	101.9	0.9
4,848	141.6	144.3	2.7

FY 1986
(millions)

1,438	\$ 33.9	\$ 53.2	\$19.3
2,875	67.7	90.2	22.5
4,313	101.5	122.9	21.4

* Each contractor was guaranteed a minimum award of 40 percent in FY 1984 and 25 percent in FY 1985 and FY 1986.

In view of the Army's own "should-cost" analysis of the FY 1984 proposals, it does not appear reasonable that the Army could declare the FY 1984 contracts to be based on adequate price competition and determine that the prices were fair and reasonable. This decision also affected the subsequent determinations that were made in the FY's 1985 and 1986 buys. The question about price reasonableness in this program was also raised in our draft report on "Pricing Aspects of the LASER HELLFIRE MISSILE Program (AGM-114A)," dated May 14, 1987 (Project 6MB-049). The auditors found that the contracts awarded to the two firms in this 3-year period were not supported by proposals that were current, accurate, and complete and were overpriced by as much as \$18.6 million. In view of these findings, a determination should not have been made that the award was made on the basis of adequate price competition.

PEACEKEEPER. The FY 1985 split award for the Third Generation Gyroscope resulted in the larger share of the award going to the highest bidder (Northrop Corporation). The contractors' FY 1985 proposals were as follows.

<u>Quantity</u>	<u>Honeywell, Inc.</u>	<u>Northrop</u>	<u>Difference</u>
54	\$13,446,000	\$13,673,016	\$227,016
45	12,816,000	13,553,955	737,955
36	12,186,000	13,044,996	858,996

Because the Air Force used a technique called the minimum total cost rule and a guarantee of a minimum sustaining rate, Northrop was able to receive the high-quantity award (54 units) at the highest price. The Air Force chose the lowest combination (Honeywell, Inc.'s bid for the 36 quantity and Northrop's bid for the 54 quantity), which amounted to \$25,859,016, as the basis to make the award. However, this action unfairly rewarded the contractor who bid a higher price at each of the quantity points at which a bid was requested. Clearly, the contract awarded to Northrop was not awarded to the offeror submitting the lowest evaluated price and, therefore, a determination should not have been made that the award was made on the basis of adequate price competition.

Conclusions. The objective of attaining increased competition is laudable. However, the introduction of competition does not necessarily result in price competition or in fair and reasonable prices. The Military Departments are treating dual-source procurements as though the introduction of a second source automatically results in fair and reasonable prices. They do not require that contractors submit certified cost or pricing data for analyses where dual-source procedures are used. We believe that it is unwise to assume that prices are fair and reasonable under dual-sourcing without some insight into the basis of the proposed prices. In all dual-sourcing cases we reviewed, cost or pricing data should have been requested, the contractor should have been required to certify the data, and defective pricing recovery clauses should have been inserted in the contracts. In these cases, dual sourcing should not be considered to be adequate price competition for purposes of waiving the requirement for certified cost or pricing data.

Based on the above, we believe that there is compelling evidence on the need for clear policy guidance and procedures for use in dual-source procurements. One of the most logical places for this type of policy and guidance would be in the Federal Acquisitions Regulation, Part 17, "Special Contracting Methods." Subpart 17.1 already discusses multiyear contracting and would seem to be a most logical choice for a discussion of dual-source procurement techniques.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Assistant Secretary of Defense (Production and Logistics):

1. Instruct the Services to obtain certified cost or pricing data and include the defective pricing recovery clause in all pricing actions where the award may be split between the offerors.
2. Expand the Defense Federal Acquisition Regulation part 17, to include a special subpart clarifying the policy and guidance to be used when soliciting and awarding contracts for dual-source acquisitions.

MANAGEMENT COMMENTS AND AUDIT RESPONSE

The Assistant Secretary of Defense (Production and Logistics) nonconcurred with the first recommendation and concurred with the second recommendation. In specific comments concerning the first recommendation, the Assistant Secretary stated that application of certified cost or pricing data should be made by the contracting officer on a case-by-case basis. He further implied that our decisions whether adequate price competition existed for the contracts in our sample were based on official files that were not well documented by the contracting officer. Finally, the Assistant Secretary felt that rather than requiring cost or pricing data for all split awards, there should be an analysis of whether price competition existed for both the high and low quantities.

We disagree that application of certified cost or pricing data should be made by contracting officers on a case-by-case basis where dual-sourced awards are involved. We believe that our report has convincingly demonstrated that contracting officers have not been able to determine whether adequate price competition existed as defined by FAR 15.804.3. This section of the FAR is very specific as to what conditions must be met for determining adequate price competition.

We share the Assistant Secretary's concern that there were considerations in these decisions that were not well documented. As a result, the audit team spent a considerable amount of time meeting with each contracting officer and buying command. Our purpose was to give them every opportunity to refute the evidence presented.

The Assistant Secretary's final statement was that rather than requiring cost or pricing data in all cases, there should be an analysis of whether price competition existed for both the high and low quantities. This gets back to the issue of whether the decision should be made by the individual contracting officer on

a case-by-case basis. We feel that we provided compelling, unrefuted evidence in the draft report showing that individual contracting officers were not able to make proper determinations in accordance with the criteria provided in FAR 15.804.3.

MANAGEMENT COMMENTS

The Office of the Assistant Secretary of the Army nonconcurred with the first recommendation and concurred with the second recommendation. Concerning the first recommendation, the Army believed that ". . . certified cost and pricing data should only be obtained when a price analysis is not adequate to demonstrate price reasonableness." The Army felt that while our audit highlighted cases where a specific contract award may indicate an overpayment, it was not an accurate portrayal of dual-source procurements. The Army went on to emphasize that the intent of dual-source procurement techniques was to reduce overall program costs through competition. The Army expressed concern that our recommendation would result in sole-source pricing techniques being applied uniformly, despite the extraordinary effort being made to ensure the benefits of competition.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

The report stated that 30 contracts, valued at about \$8.8 billion, were classified by contracting officials as based on adequate price competition, even though they did not meet the FAR 15.804.3(b) criteria for such a determination. The thrust of our finding was that there was adequate evidence to indicate that the price the Government was receiving was not based on adequate price competition and that contracting officers should not have waived our rights to recovery under the Truth in Negotiations Act, Public Law 87-653. We do not believe that price analysis alone was adequate to demonstrate price reasonableness. As is demonstrated in our discussion of the one Army system in our sample, HELLFIRE, the Army went considerably beyond price analysis in evaluating the fiscal year 1984 proposals. The Army performed a should-cost analysis and had a clear indication that the prices may not have been fair and reasonable. Despite this, the Army characterized the buy as based on adequate price competition and waived the Government's rights to protection under Public Law 87-653, Truth in Negotiations Act.

Concerning the Army's contention that we highlighted cases where a specific contract award indicated an overpayment, we randomly selected the dual-sourced systems to be audited from the Selected Acquisition Report. We allowed the Services to indicate those that were dual sourced. Within the selected dual-sourced systems, we evaluated every production contract. In 30 out of 38 cases, we found that the contracting officers had erroneously categorized the contract as based on adequate price competition in accordance with FAR 15.804.3(b). The preponderance of

evidence developed in this audit clearly demonstrated that most dual sourcing did not lead to adequate price competition as defined in FAR 15.804.3(b). Therefore, dual-sourced contracts should not be exempted from the provisions of Public Law 87-653, Truth in Negotiations Act, simply because they are dual sourced.

The intent of dual-source procurement techniques is to reduce overall program costs through competition as stated by the Army. We agree that costs associated with developing and maintaining a second source may result in higher contract costs at the outset. This is an even more compelling reason why such contracts should not be classified as based on adequate price competition and do not meet the criteria described in FAR 15.804.3(b) for making such a determination.

The Army's final argument was that a high level review of major dual-source price analyses should ensure that price reasonableness was obtained. The systems we looked at almost universally received such reviews. Certainly the Army system, HELLFIRE, did. Let this system was a perfect example of why we consider Truth in Negotiations Act protection to be a must. The Army performed a should-cost analysis of the FY 1984 proposals. The total contract award exceeded the "should-cost" recommendation and the negotiation objective by over \$40 million. Furthermore, each contractor had a guarantee of a minimum award that exceeded 25 percent. In the face of this compelling evidence of lack of adequate price competition, the Army characterized these awards as based on adequate price competition in accordance with FAR 15.804.3(b). The higher level reviews involved in this buy did not ensure that price reasonableness was obtained.

The Army was correct in stating that we recommend that sole source pricing techniques be applied uniformly to dual-sourced contracts. Our review led us to the conclusion that the "extraordinary effort" put forth by the Military Departments was not guaranteeing or leading to adequate price competition. Thus, from the viewpoint of FAR 15.804.3(b), we do not consider dual sourcing to be a guarantee of adequate price competition. In fact, we concluded that dual sourcing of and by itself rarely led to adequate price competition. Consequently, our recommendation was to apply sole-source pricing techniques to dual-sourced contracts because the contractors involved are proposing prices that closely resemble sole-source prices.

MANAGEMENT COMMENTS

The Under Secretary of the Navy nonconcurred with the first recommendation and concurred with the second recommendation. Concerning the first recommendation, the Navy stated that:

Cost and pricing data should not normally be obtained in dual-source programs unless the procuring contracting officer determines that price competition does not exist. Since prices are solicited across a full range of step ladder quantities, normally including a 0-100% split, price competition does exist. Obtaining cost and pricing data would increase costs to the Government, the contractors, and the taxpayer.

Concerning the second recommendation, the Navy stated that "The FAR should be updated to include guidance on dual sourcing of programs." The Navy went on to express severe concern about the audit in general and the methodologies used and concluded with the recommendation that this report not be issued because it does not reflect the current competitive, dual-source environment.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

The Navy stated that:

The purpose of cost and pricing data is to put us on a relatively equal footing with contractors when they are immune to the competitive forces of the marketplace. The IG, DoD asserts that we need this data in dual source programs because they do not consider those programs to be competitive...contending that competition is not effective from the outset of the program is simply contrary to the demonstrated behavior of our competitive industries.

Our report clearly states that dual-source procurements usually do not result in adequate price competition as defined in Federal Acquisition Regulation 15.804.3. Competition is different from adequate price competition as defined by the FAR 15.804.3. The Federal Acquisition Regulation clearly implies that a program can be competitive without having adequate price competition. Calling a dual-sourced program competitive for purposes of competition statistics presents us with no problem. However, stating that it results in adequate price competition and waiving cost and pricing data on the basis that it meets the criteria of FAR 15.804.3 when it does not, does present us with problems. We never stated that competition was not effective from the outset. The report questions whether the items sampled were accurately determined to have been awarded on the basis of adequate price competition in accordance with FAR 15.804.3. This

FAR section states that, among other things, adequate price competition does not exist if an award is not based on the lowest evaluated price.

MANAGEMENT COMMENTS

The Air Force nonconcurrent with the first recommendation and concurred with the second recommendation. Concerning the first recommendation, the Air Force stated that:

" . . . we reject the assumption that adequate price competition can never occur when splitting awards. Through careful use of price analysis techniques and a firm grasp of the technique being used to determine the split, the contracting officer can detect when adequate price competition is not present.

The Air Force also stated that:

While we believe that cost and pricing data is necessary on some dual-source acquisitions, the depth of cost and pricing data needed and its certification must be decided on a case-by-case basis by the contracting officer. At the point of RET issuance, the contracting officer must decide whether adequate price competition is expected.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

The report states that 30 contracts, valued at about \$8.8 billion, were classified by contracting officials as based on adequate price competition, even though they did not meet the FAR 15.804.3(b) criteria for such a determination. The thrust of our finding was that there was adequate evidence to indicate that the price the Government was receiving was not based on adequate price competition and that contracting officers should not have waived the Government's rights to recovery under the Truth in Negotiations Act. Nowhere in the report do we state that adequate price competition can never occur when splitting awards.

We have already demonstrated in this audit that contracting officers were not able to make proper determinations as to adequate price competition through careful use of price analysis techniques and a firm grasp of the technique being used to determine the split. If the determinations continue to be made on a case-by-case basis, contracting officers will continue to accept contractor prices as fair and reasonable without sufficient insight into the basis of the proposed prices, and the Government will not be able to recover any overpricing reported later as the result of postaward audits of dual-sourced contracts.

GLOSSARY OF TERMS

Contractor Research and Development denotes the efforts taken by the second source to translate and use design specifications. It may involve reverse engineering or redesign work.

Cost Analysis is the review and evaluation of a contractor's cost or pricing data. An opinion is formed on the degree to which the contractor's proposed costs represent what contract performance should cost, assuming reasonable economy and efficiency. It includes appropriate verification of cost data, evaluation of specific elements of costs, and projection of these data to determine the effect on price factors like cost necessity, allowances for contingencies, and the basis used for allocation of overhead costs.

Cost Overrun is the amount of the allowable cost by which the contractor has exceeded the target cost.

Cost or Pricing Data means data consisting of all facts that exist up to the time of agreement on price, which prudent buyers and sellers would reasonably expect to have a significant effect on price negotiations.

Cost Underrun is the amount the contractor has spent below the contract target cost in terms of allowable cost.

Fixed-Price Contract is not subject to an adjustment based on a contractor's cost performance.

Fixed-Price-Incentive Contract provides for a price and profit adjustment that will be based on the relationship between a contractor's final cost to its target cost.

Government Administration Costs represent the added costs that are needed to solicit and select the second source and evaluate and administer its contracts.

Learning Curve is a tool of calculation that is primarily used to project resource requirements that are required for a production run (e.g., direct manufacturing labor hours or quantity of material). The concept of the learning curve was adopted from the observation that individuals who perform repetitive tasks exhibited a rate of improvement due to increased manual dexterity.

MICOM Approach is a split award technique that is used by the U.S. Army Missile Command. It involves the solicitation of lot prices from contractors for various percentages of the buy. An average adjusted bid is calculated for each contractor

GLOSSARY OF TERMS (CONTINUED)

based on proposal costs for each percentage. The percent differential is calculated from the overall average adjusted bid of each contractor, which then determines the percent of award.

Minimum Sustaining Rate is the guarantee that the highest priced contractor will receive a fixed portion of the annual buy.

Minimum Total Cost Rule is a technique used to split awards among contractors. It involves the solicitation of prices for various percentages of the total buy quantity. The related offers are added together to arrive at a total lot cost. The lowest cost combination is used as a basis to establish the split that is most beneficial to the Government.

Nonrecurring Second-Source Costs is the investment made by the Government to establish a new supplier as a competitive producer. The costs usually include contractor research and development, technology transfer, qualification, special tooling and test equipment, and Government administration.

Premium Payment is the difference between the lowest evaluated price and the total value of the split awards.

Price Analysis is the process of examining and evaluating a prospective price without evaluating the separate cost elements and proposed profit. It may be accomplished by a comparison of submitted quotations, a comparison of price quotations and contract prices with current quotations for the same or similar items, or a comparison of proposed prices with independently developed Government estimates.

Program Loss occurs when the combined recurring unit prices of the multiple sources exceeds the projected sole-source unit price during a particular period.

Program Savings result when the reduction in unit prices due to multiple sourcing exceeds all investment costs made to develop additional source(s) including the time value of money, effects of learning, program losses, and premium payments.

Qualification Costs are incurred for the evaluation, testing, and approval of the second source's products before competition.

Recurring Cost is the unit price the Government pays for a weapon system or component.

GLOSSARY OF TERMS, (CONTINUED)

Special Tooling and Test Equipment costs are applicable to the added investment in special tooling and test equipment the Government makes to enable the second source to produce the item. If procurement quantities of 1,000 units per year are anticipated, a single source must be able to efficiently meet that requirement. In a dual-source environment, each contractor must be able to produce at 70 to 80 percent of the total requirement for effective competition to occur. The amount contractors are collectively able to produce over 1,000 units is the added cost to the Government.

Technology Transfer Costs relate to the procurement of the technical data package from the systems developer and the costs of technical support and assistance that must be provided to the new source.

Time Value of Money is a standard on a discount rate that must be used in all investment decisions.

ANALYSIS OF INVESTMENT COSTS

<u>Program</u>	<u>Invest₉nt Costs <u>1/</u> (millions)</u>	<u>Premium Prices (millions)</u>	<u>Time Value of Money <u>1/</u> (millions)</u>	<u>Total (millions)</u>
TOMAHAWK	\$ 202.7	\$232.9	\$ 43.6	\$ 479.2
FFG-7	<u>1/</u>	65.6	6.6	72.2
LSD-41	<u>1/</u>	0	-	
SSN-688	<u>1/</u>	69.0	6.0	66.0
NAVSTAR GPS	<u>1/</u>	<u>2/</u>	-	
JTIDS	25.5	<u>2/</u>	2.6	28.1
AMRAAM	195.3	<u>2/</u>	19.5	214.8
IR MAVERICK	104.2	54.6	15.9	174.7
Standard Missile-2 (GC&A)	64.6	<u>2/</u>	6.5	71.1
PEACEKEEPER	94.6 <u>3/</u>	<u>1.9</u>	9.7	106.2
HELLFIRE	78.1	38.4	11.7	128.2
CG-47	170.0	163.3	33.3	366.6
SPARROW	62.9	202.2	26.5	291.6
LHX	<u>1/</u>	<u>2/</u>	-	-
MK-50 Torpedo	221.2	<u>2/</u>	22.1	243.3
SEA LANCE	<u>4.6</u>	<u>2/</u>	.5	<u>5.1</u>
	\$1,223.7	\$818.9	\$204.5	\$2,247.1

1/ Program offices did not submit investment cost data in response to our questionnaire.

2/ These programs will be dual sourced in the future. Premium prices, if any, are not yet available.

3/ This figure is composed of the investment costs for all subsystems, which were dual, sourced.

REVIEW OF ECONOMIC ANALYSES AND
PRIMARY REASONS FOR ESTABLISHING THE
ADDITIONAL SOURCES OF SUPPLY

Dual-Source Programs

<u>Program</u>	<u>Commodity</u>	<u>Economic Analysis</u>	<u>Reasons</u>
HELLFIRE	Projectile	Yes	Mobilization
CG-47	Ship	No	Mobilization
FFG-7	Ship	No	Mobilization
LSD-41	Ship	No	Price Competition
SPARROW	Missile	No	Mobilization
SSN-688	Ship	No	Mobilization
TOMAHAWK	Missile	Yes	Mobilization
PEACEKEEPER	Missile	Yes	Directed <u>1</u> /

Planned Dual-Source Programs

LHX	Helicopter	No	Directed <u>1</u> /
MK-50	Torpedo	Yes	Directed <u>1</u> /
SEA LANCE	Missile	Yes	Directed <u>1</u> /
SM-2	Missile	Yes	Directed <u>1</u> /
IR MAVERIC~C	Missile	Yes	Directed <u>1</u> /
AMRAAM	Missile	Yes	Directed <u>1</u> /
JTIDS	Communications		
	System	No	Directed <u>1</u> /
NAVSTAR	Communications		
	System	No	Directed <u>1</u> /

Nondual-Source Program

COPPERHEAD	Projectile	Yes	NA <u>2</u> /
RPV	Air Vehicle	Yes	NA <u>2</u> /
C/MH-53E	Helicopter	No	NA <u>2</u> /
SH-60F	Helicopter	No	NA <u>2</u> /
B-1B	Aircraft	No	NA <u>2</u> /
C-17A	Aircraft	Yes	NA <u>2</u> /
DSP	Satellite	No	NA <u>2</u> /

1/ Directed by higher authority.

2/ NA means not applicable.

COMPENDIUM OF FEDERAL AND DEFENSE ACQUISITION
REGULATIONS APPLICABLE TO DUAL-SOURCE PROCUREMENTS

FAR 14.407-2 - The contracting officer shall determine that a prospective contractor is responsible and that the prices offered are reasonable before awarding the contract. The price analysis techniques in FAR 15.805-2 may be used as guidelines.

FAR 15.101 - Any contract awarded without using sealed bidding is a negotiated contract.

FAR 15.804-2 - Certified cost or pricing data are required for the award of any negotiated contract expected to exceed \$100,000 except as provided in FAR 15.804-3.

FAR 15.804-2(b) - When certified cost or pricing data are required, the contracting officer shall require the prospective contractor to submit the data and certify that it was accurate, complete, and current as of the date of the final agreement on price.

DFAR 15.804-2(b)(1) - Cost or pricing shall not be required merely in anticipation of post-award review of the contract.

FAR 15.804-3(a)(1) - The contracting officer shall not require the submission or certification of cost or pricing data when it is determined that prices are based on adequate price competition.

FAR 15.804-3(b)(1) - Adequate price competition exists if:
offers are solicited:

- o from two or more responsible offerors that can satisfy the Government's requirements submit priced offers responsive to the solicitation's expressed requirements; and
- o the offerors compete independently for a contract to be awarded to the responsible offeror submitting the lowest evaluated price.

FAR 15.804-3(b)(2) - If price competition exists, the contracting officer shall presume it is adequate unless:

- o the solicitation is made under conditions that unreasonably deny to one or more known and qualified offerors an opportunity to compete;
- o the low offeror has such a decided advantage that it is practically immune from competition; or
- o there is a finding, supported by a statement of the facts and approved at a level above the contracting officer, that the lowest price is unreasonable.

COMPENDIUM OF FEDERAL AND DEFENSE ACQUISITION
REGULATIONS APPLICABLE TO DUAL-SOURCE PROCUREMENTS
(CONTINUED)

FAR 15.804-3(b)(3) - A price is "based on" adequate price competition if it results directly from price competition or if price analysis alone clearly demonstrates that the proposed price is reasonable in comparison with current or recent prices for the same or substantially the same items purchased in comparable quantities, terms, and conditions under contracts that resulted from adequate price competition.

FAR 15.804-7 - If, after award, certified cost or pricing data are found to be inaccurate, incomplete, or noncurrent as of the date of final agreement on price, the Government is entitled to a price adjustment. The clause at 52.215-22 gives the Government the right to a price adjustment for defective contractor pricing.

FAR 15.804-8 - When contracting by negotiation, the contracting officer shall insert the clause at 52.215-22 (Price Reduction for Defective Cost or Pricing Data) in solicitations when it is contemplated that cost or pricing data will be required, and in contracts when it was required.

FAR 15.805-1(b) - When cost or pricing data are required, the contracting officer shall make a cost analysis to evaluate the reasonableness of individual cost elements.

FAR 15.805-2 - The contracting officer is responsible for selecting and using whatever price analysis techniques will ensure a fair and reasonable price. One or more of the following techniques may be used to perform a price analysis:

- o Comparison of price quotations received in response to the solicitation.
- o Comparison of prior quotations and contract prices with current quotations for the same or similar end items.
- o Application of rough yardsticks to highlight significant inconsistencies that warrant additional pricing inquiry.
- o Comparison with competitive published price lists, published market prices of commodities, similar indexes, and discount or rebate arrangements.
- o Comparison of proposed prices with independent Government cost estimates.

COMPENDIUM OF FEDERAL AND DEFENSE ACQUISITION
REGULATIONS APPLICABLE TO DUAL-SOURCE PROCUREMENTS
(CONTINUED)

FAR 15.805-5 - When cost or pricing data are required, the contracting officer shall request a field pricing report (which may include an audit review by the cognizant contract audit activity) before negotiating any contract or modification resulting from a proposal in excess of \$500,000...unless information available to the contracting officer is considered adequate to determine the reasonableness of the proposed cost or price.

DFAR 15.805-5(a)(70) - If an audit review will not be required, approval shall be obtained at a level above the contracting officer.

LIST OF CONTRACTS THAT WERE CLASSIFIED
AS BASED ON ADEQUATE PRICE COMPETITION

<u>Service</u>	<u>Buying Office</u>	<u>Program</u>	<u>Commodity</u>	<u>Contract Number</u>	<u>Quantity Procured</u>	<u>Amount (000)</u>
Army	MICOM <u>1</u> /	HELLFIRE	Projectile	84-C-A162	2,651	\$109,371
				84-C-A163	2,000	94,448
				85-C-A040	1,676	68,652
				85-C-A041	4,104	133,178
				86-C-0494	4,500	127,099
				86-C-0496	1,500	62,697
Navy	NAVAIR <u>2</u> /	TOMAHAWK	Missile (AUR)	84-C-4484	180	154,751
				84-C-4485	120	148,445
				84-C-4484 Option	206	185,212
				84-C-4485 Option	139	160,321
Navy NAVSEA	<u>3</u> /	FFG-7	Ship	76-C-2001	5	223,796
				76-C-2100	3	146,576
				76-C-2101	3	149,039
				77-C-2080	3	150,764
				77-C-2080 Option	3	143,237
				77-C-2081	2	101,118
				77-C-2081 Option	3	143,083
				77-C-2082	3	150,605
				77-C-2082 Option	3	142,035
				79-C-2800	3	209,913
				79-C-2800 Option	3	195,401
				79-C-2801	3	214,426
				79-C-2801 Option	1	66,323
				79-C-2802	2	144,182
				79-C-2802 Option	2	137,031
				81-C-2201	3	247,026
				81-C-2201 Option	2	169,767
				81-C-2201 Option	1	89,287
				81-C-2202	2	181,908
Navy NAVSEA	<u>3</u> /	FFG-7	Ship	81-C-2202 Option	1	88,035
				81-C-2202 Option	1	89,897
				81-C-2202 Option	1	88,192
				81-C-2203	1	93,601
Navy NAVSEA	<u>3</u> /	LSD-41	Ship	84-C-2027	1	166,614
				84-C-2027 Option	2	304,804
				84-C-2027 Option	2	297,897

LIST OF CONTRACTS WHICH WERE CLASSIFIED
AS BASED ON ADEQUATE PRICE COMPETITION (CONTINUED)

<u>Service</u>	<u>Buying Office</u>	<u>Program</u>	<u>Commodity</u>	<u>Contract Number</u>	<u>Quantity</u>	<u>Amount (000)</u>
Navy	NAVSEA <u>3</u> /	SSN-688	Submarine	83-C-2039	2	560,211
				84-C-2063	2	519,985
				84-C-2063 Option	1	282,982
				84-C-2064	1	278,000
				84-C-2064 Option	3	779,467
				86-C-2076	4	1,032,667
Navy	NAVSEA <u>3</u> /	CG-47	Ship	84-C-2004	2	306,122
				85-C-2035	1	228,913
				85-C-2036	2	364,276
				85-C-2035 Option	1	232,973
				85-C-2036 Option	2	367,234
Navy	NAVAIR <u>2</u> /	SPARROW	Missile	84-C-0161	1,560	205,627
				85-C-0074	1,300	206,594
				85-C-0075	1,845	240,741
				86-C-0147	1,679	222,743
				86-C-0148	1,668	219,453
Air Force	BMO <u>4</u> /	PEACEKEEPER	Missile	85-C-0077	36	12,186
			(TGG)			
				85-C-0078	54	13,673
				86-C-0072	52	8,850
			Missile	86-C-0151	219	5,618
			(PS)			
				<u>86-C-0152</u>	95	<u>28,643</u>
TOTALS				38 Contracts		\$11,525,689

1/ Army Missile Command.

2/ Naval Air Systems Command.

3/ Naval Sea Systems Command.

4/ Ballistics Missile Office.

CONTRACTS MISCLASSIFIED AS BASED ON ADEQUATE PRICE COMPETITION

Program	Year of Buy	Number of Contracts	Award Amount (000)	Premium Price Paid (000)	Reasons		
					Not lowest 1/Evaluated Price 2/	Inability to Compete 3/	
TOMAHAWK	1985	2	\$ 303,196	\$109,806	4/	x	x
	1986	1985 Options	345,533	123,135	4/	x	x
CG-47	1984	1	306,122	70,849		x	
	1985	2	593,189	38,218		x	
	1986	1985 Options	600,207	54,203		x	
PEACEKEEPER							
(TGG)	1985	2	25,859	227			x
(RV)	1986	2	64,261	1,711		x	
SPARROW	1984	1	205,627	-----			x
	1985	2	447,335	67,737			x
	1986	2	442,196	27,784			x
HELLFIRE	1984	2	203,819	11,815			x
SSN	1984	2	797,985	26,909		x	
	1985	1984 Options	1,062,449	33,000		x	
FFG-7	1975	3	165,666	25,973		x	x
	1976	1975 Options	353,745	10,235		x	x
	1977	3	402,487	874		x	x
	1978	1977 Options	428,355	2,249		x	x
	1979	3	568,521	4,513		x	x
	1980	1979 Options	398,755	9,740		x	x
	1981	3	522,535	5,031	5/	x	x
	1982	1981 options	257,802	1,769	6/	x	x
	1983	1981 Options	179,184	4,044		x	x
	1984	1981 Option	88,192	1,167		x	x
TOTALS		30	\$8,763,020	\$630,989			

1/ Premium payments are the difference between the lowest evaluated price and the total value of the split awards.

2/ Refers to FAR 15.804-3(b)(1) definition shown in Appendix D.

3/ Refers to FAR 15.804-3(b)(2) definition shown in Appendix D.

4/ Premiums reflected for the FY 1985 and FY 1986 buys were based on a proposal submitted by General Dynamics for the FY 1985 buy in the amount of \$693,390,081 for sole source, maximum quantity (300).

5/ The lowest price for 6 FFG's, the basic fourth flight award, was submitted by Bath Iron Works in the amount of \$472,625,078. Comparing this amount with the actual award amount, \$522,534,694, indicates a potential premium of \$49,909,616 paid.

6/ The lowest price for 3 FFC's, the FY 1982 option, was submitted by Bath Iron Works in the amount of \$240,675,535. Comparing this amount with the actual award amount, \$257,802,119, indicates a potential premium of \$17,126,584.



ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-4000

PRODUCTION AND
LOGISTICS
(PIDSPS)

May 10 1988

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING
OFFICE OF THE INSPECTOR GENERAL

SUBJECT: Draft Report on the Audit of Dual Source Procurement Techniques
(Project # 6CD-036)

The report suggests that dual sourcing does not result in price competition and that cost or pricing data should be obtained in all split awards. Also, the report attempts to determine if there were savings on an annual basis.

We agree with the IG that there is room for improvement in our dual source guidance and in our application of the dual source strategy. We will be providing additional guidance to implement the statute contained in Chapter 144, Section 2438 "Major programs: competitive alternate sources," 10 USC. This guidance should facilitate the Defense Acquisition Board (DAB) consideration of the economic and mobilization base issues prior to making a dual source decision on an acquisition program. The recent revision of DoDI 5000.2 also contains guidance on the law. Further, there are indications that the Services are now using the Defense Systems Management College (DSMC) model to assist in the determination of an appropriate strategy for a given acquisition program.

We have responded to your specific recommendations in the attachment. There are other points in the draft report that we recommend be considered in the final report. Your audit included split award contracts starting in 1975. Prior to the Competition in Contracting Act (CICA) of 1984 the only criterion for dual sourcing was the need for a mobilization base. CICA provided the legal basis for developing two sources for cost savings. Hence programs looked at before 1984 may or may not demonstrate cost savings. It is not uncommon for a dual sourced program to require several years before a break-even point is realized.

We hope that our comments will be useful in finalizing your draft report.

Jack Katzen

ASD Production and Logistics Comments on DOD(IG) Project No. 6CD-036

In reviewing the recommendations we have the following comments:

Recommendation A-1: That the Assistant Secretary of Defense (Production & Logistics) instruct the Services to obtain certified cost or pricing data and include the defective pricing recovery clause in all pricing actions where the award maybe split between offerors.

OSD Comment: Nonconcur. Our position supports continued application of certified cost or pricing data on a case-by-case basis and the decision should be made by the contracting officer. The extent of data detail which is required for each procurement should also continue to be a part of that same determination. The insertion of the clause, "Price Reduction for Defective Cost or Pricing Data", which stems from the Truth in Negotiations Act, should follow the same case-by-case review used in making the cost or pricing data determination. An area that needs to be discussed regarding this recommendation is how well the contracting officer has documented the contract file to provide the rationale for determining that price competition does exist. Rather than requiring cost or pricing data, for all split awards, there should instead be an analysis of whether price competition exists for both the high and low quantities awarded. While cost or pricing data maybe necessary in some cases from the source awarded the low quantity in a split award, there certainly are instances where the price for the low quantity can be shown to be competitive. We must emphasize the need for case by case determination instead of calling for data in every split award.

Recommendation A-2: That the Assistant Secretary of Defense (Production and Logistics) expand the Defense Federal Acquisition Regulation Part 17, to include a special subpart clarifying the policy and guidance to be used when soliciting and awarding contracts for dual-sourcing acquisitions.

OSD Comment: Concur. We plan to review the coverage of dual source competition in the DFARS and to ensure that proper attention and guidance is provided. Whether this will be covered in Chapter 17 will depend on the results of the review.

Recommendation B: That the Assistant Secretary of Defense (Production and Logistics) issue a dual source policy directive that establishes standard procedures for calculating investment costs and for performing cost benefit analysis before and after the dual source decision is made.

OSD Comment: Concur. This office is currently involved in issuing policy guidance on alternative sources (dual sourcing) of major programs with a list of specific elements to be considered in determining the merits of introducing alternative sources. This coverage will include both full scale engineering development (FSED) and production phases of the acquisition process. In addition, with the legislative requirement to review all major programs for the possible introduction of alternative sources in both FSED and production (Section 2438, Chapter 144, 10 USC) we have included direction in DODI 5000.2. As a result we believe greater attention will be given to the basis for selecting the dual source acquisition technique.



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310

SARD-KP

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING,
DEPARTMENT OF DEFENSE

SUBJECT: Draft Report on the Audit of Dual-Source
Procurement Techniques (No. 6CD-036) Dated 5
January 1988

This office has reviewed the subject draft report and offers the following comments:

Recommendation A.1: that the Assistant Secretary of Defense (Production and Logistics) instruct the Services to obtain certified cost or pricing data and include the defective pricing recovery clause in all pricing actions where the award may be split between offerors.

Army Comment: Nonconcur. Although the subject audit highlights some cases where a specific contract award may indicate an overpayment, this is not an accurate portrayal of dual source procurements. The intent of dual source procurement techniques is to reduce overall program costs through competition. It is well understood that costs associated with developing and maintaining a second source may result in higher contract costs at the outset. However, we firmly believe that a viable second source can often lead to greatly reduced program costs.

Under the Competition in Contracting Act, competition is the rationale and basis for government contracting. Sole source procurement techniques are the exception. This recommendation is that sole source techniques be applied uniformly, despite the extraordinary effort being made to ensure the benefits of competition.

Certified cost and pricing data should only be obtained when a price analysis is not adequate to demonstrate price reasonableness. A high level review of major dual source price analyses should ensure that price reasonableness is obtained.

SARD-KP

SUBJECT: Draft Report on the Audit of Dual-Source Procurement Techniques
(No. 6CD-036) Dated 5 January 1988

Recommendation A.2: That the Assistant Secretary of Defense (Production and Logistics) expand the Defense Federal Acquisition Regulation Part 17, to include a special subpart clarifying the policy and guidance to be used when soliciting and awarding contracts for dual-source acquisitions.

Army Comment: Concur. DFARS Part 17 should be updated to include guidance on dual-source procurement techniques.

Recommendation B: That the Assistant Secretary of Defense (Production and Logistics) issue a dual-source policy directive that establishes standard procedures for calculating investment costs and for performing cost-benefit analyses before and after the dual-source decision is made.

Army Comment: Concur. However, any standard procedures must anticipate the diversity of programs, and the various stages within the program at which a dual-source decision may be made. As discussed in the Army comment on recommendation A.1, a specific contract action may not reveal, anticipated program savings which result from maintaining a second source. It may not be feasible to ever calculate the effects a viable second source has on the prime sources costs and cost reduction efforts. The Army firmly believes competition results in reduced program costs vis-a-vis a sole source situation. The benefits of attempting to quantify the exact savings are not recognized. However, a DoD policy directive to assist in performing cost-benefit analyses is always welcome.

HARRY G. KARGEANNES
Major General, GS
Director, U.S.Army Contracting



DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20350-1000

14 April 1988

MEMORANDUM FOR THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subj: DRAFT REPORT ON THE AUDIT OF DUAL-SOURCE PROCUREMENT
TECHNIQUES (PROJECT NO. 6CD-036)

Encl: (1) Detailed comments concerning Draft Report on the Audit of
Dual-Source Procurement Techniques (Project No. 6CD-036)

I am making the response directly to you because of the importance we in the Navy place on the allegations that our fundamental approach to establishing competitive dual sources is flawed.

We have reviewed the subject audit report and do not consider it an accurate or objective evaluation of the economics and efficiencies which result from this competitive procurement strategy. It is the Navy's firm belief based on documented results that dual source procurements result in competitive prices which do not require certified cost or pricing data or defective pricing clauses to protect the Government's interest. By any objective measure including comparison with sole source budget projections, comparison with sole source prices and price analysis of the competitive offers, substantial acquisition savings have been achieved. In addition, based on reduced contractor bid and proposal costs, reduced Government effort and time to perform unneeded and burdensome audits, technical evaluations and negotiations or reduced time delays in delivery of equipment to the fleet, the non-acquisition savings of dual source procurements have been enormous, clearly in the multi-millions of dollars. For the audit report to dwell primarily on the initial added costs, which are more than offset by savings, is a disservice to the aggressive actions of the Navy to implement the clear will of Congress and the public to rely on the forces of competition to ensure fair prices for our defense procurements. Accordingly, the following comments address the draft report recommendations:

Recommendation A. 1.:

"Instruct the Services to obtain certified cost or pricing data and include the defective pricing recovery clause in all pricing actions where the award may be split between the of offerors."

Navy Comment: Non-concur. Cost and pricing data should not normally be obtained in dual source programs

unless the procuring contracting officer determines that price competition does not exist. Since prices are solicited across a full range of stepladder quantities, normally including a 0-100% split, price competition does exist. Obtaining cost and pricing data would increase costs to the government, the contractors and the taxpayer.

Recommendation A. 2.:

"Expand the Defense Federal Acquisition Regulation Part 17, to include a special sub-part clarifying the policy and guidance to be used when soliciting and awarding contracts for dual-source acquisitions."

Navy Comment: Concur. The FAR should be updated to include guidance on dual sourcing of programs.

Recommendation B,

"We recommend the Assistant Secretary of Defense (Production and Logistics) issue a dual-source policy directive that establishes standard procedures for calculating investment costs and for performing cost-benefit analyses before and after the dual-source decision is made." *

Navy Comment: Concur. However, any model developed must be flexible enough to accommodate products as diverse as radars, missiles, ships and aircraft. The Navy's experience to date indicates that a single, comprehensive model has not been established that fits all situations. Although certain cost estimates and savings projections can be made regarding the potential outcome of dual source programs, in the final analysis, the dual-sourcing decision is made on prudent business judgment after taking into account the various quantitative and qualitative factors relating to a specific program. That judgment has proven correct in those Navy programs selected for dual sourcing. In any analysis the burden should be on those wishing to continue sole source contracting to clearly demonstrate that sole source contracting is less costly.

The recommendations made and conclusions drawn in the subject report have lost sight of the purpose of the audit. As stated in the opening paragraph, "The overall audit objective was to determine whether dual-source procurement techniques were achieving increased competition leading to greater economies and efficiencies in the procurement process...." The Congress affirmed its preference for dual-sourcing rather than sole sourcing in the Competition in Contracting Act of 1984. As stated on page 3 of the Audit "(Congress) required DoD to establish more than one source of supply if it would increase or

maintain competition and would likely result in reduced overall costs for acquisition or for anticipated acquisition...." (emphasis added). The Navy has implemented aggressively the recommendations of the procurement commissions and the intent of Congress in its dual sourcing programs. The Navy's projected savings of some \$4.0 billion in just three Navy programs clearly attests to the wisdom of the various commissions and the Congress.

Dual sourcing is a long-term strategy designed to overcome the inherent structural deficiencies found in the sole source procurement process. The Navy and Congress goal of reduced overall costs in major acquisitions requires a carefully structured and continuing commitment to introducing competition into selected major programs that have a high potential for outyear pay back of initial investments. This report, in focusing on the costs of dual sourcing during a program's infancy and insisting that cost and pricing data is indispensable to the process is a solution in search of a problem. As I stated on 1 March 1988 in my testimony before the House Appropriations Committee, Defense Subcommittee on the posture and fiscal year 1989 budget of the United States Navy and Marine Corps,

We have vigorously pursued competition in order to achieve the four goals of the 1981 Carlucci Initiatives: reduced costs, a broadened industrial base, improved quality, and fairness. In the period 1982 to 1986 the annual value of competitively awarded Navy contract dollars increased from \$8.1 billion to \$23.2 billion. During FY 1987 the Navy competed 55.3 percent (\$27.3 billion) of its procurement dollars....

From FY 1983-1987, the Navy realized a savings of over seven billion dollars in its shipbuilding programs. . . (A) conservative estimate is that one third of the savings was due to competition... enough to buy three DDG-51 class Aegis destroyers or three SSN-688 class submarines.

Competition's detractors argue that dual sourcing does not always equate to adequate competition, and that, in some circumstances, the non-recurring costs necessary to establish a second source have forced unit costs above that projected for a continued sole source buy. Although not all programs have demonstrated clear savings due to competition, on balance, our experience is that competition is saving money.

Opening up more procurement and support programs to competition and fostering an environment which invites contractor participation have enhanced mobilization capability by expanding the defense industrial base. ...the Navy has thirteen ordnance systems in dual source

production today compared to four ten years ago. This provides us with a significant wartime surge capability above that of the sole source environment and frequently results in reduced procurement costs. For example, the dual source Tomahawk missile (all-up-round) program procurement cost has decreased from \$11.0 billion to \$9.2 billion....

(Tlhere is no evidence that "low bidder mentality" has led to reduced quality. In fact,...quality has improved...(The) depot rejection rates for the Tomahawk cruise missile...greatly improved after a second source was established....

(Tlhe Navy, through its competition policy has significantly increased the opportunities for companies to obtain a share of Navy business. An increase in the percent of competitive actions from 30 percent to nearly 90 percent over the past five years is indicative of our intent to distribute fairly our business base....

The Navy's competition strategy is succeeding...We will continue to pursue our competition policy and through it increase our national industrial base....

Finally, each major dual source program is subject to a comprehensive review and approval process within the Navy. The acquisition plan must demonstrate a realistic approach to dual sourcing including cost and schedule risks, streamlining, the potential for sub-contractor competition, quality, maintainability and reliability and overall expected benefits to the Navy. Only after this review of the acquisition plan by the cognizant Acquisition Executive will a Program Endorsement Memorandum be signed. In addition, each business clearance for these major dual source acquisitions must be reviewed and approved at the Secretariat Level prior to contract award. This system provides an important and objective crosscheck of the soundness of the acquisition strategy from initial concept to contract award. Also, since this process focuses on the overall program strategy, the Navy is assured that long run benefits are not sacrificed to short run savings.

Based on the foregoing, the Navy recommends that this report not be issued as it does not reflect the current competitive, dual source environment. Additional comments are provided at enclosure (1).

Copy to:
NAVINSGEN
NCB53
APPENDIX I
Page 4 of 13

H. Lawrence Garrett, III
Under Secretary of the Navy

ADDITIONAL COMMENTS CONCERNING
DRAFT SUMMARY REPORT ON THE AUDIT OF
DUAL-SOURCE PROCUREMENT TECHNIQUES REPORT NO. (6CD-036)

The Navy recognized that the Congress created a substantial change in the direction of competition by passing the Competition in Contracting Act (CICA) in 1984. The report notes that virtually every study of the procurement process has recommended increased competition and dual sourcing as the most effective methods of obtaining the best value for the procurement dollar. As noted on page 2 "the Grace Commission, politician and defense procurement critics agree that the degree of competition in the production phase of the acquisition programs could be increased by expanding the use of the dual-source procurement technique... (and)... by maintaining at least two sources of supply throughout this phase, the benefits of competition would take effect and result in lower contract prices..." This report seems to understate the significance of this profound change in direction that the Congress has, made to the acquisition process. Too, the wisdom and effectiveness of dual sourcing cannot be determined by selectively choosing several annual contracts. Rather, any analysis must look at potential savings over the life of those programs which have been dual sourced. Any other analysis is not an accurate reflection of the benefits available to the government. The Navy did provide data that accurately portrayed the current status of the Navy's dual source policy to the auditors at the face to face meeting. Our view was that your personnel were receptive to the information and that the report would likely be revised substantially. However, no changes were made.

The purpose of cost and pricing data is to put us on a relatively equal footing with contractors when they are immune to the competitive forces of the marketplace. The DODIG asserts that we need this data in dual source programs because they do not consider those programs to be competitive. Our analysis of dual source programs, however, shows that from the outset contractor pricing is driven by the planned competitive environment. Often sole source companies make buyout or multiyear offers once a program is selected for dual sourcing. Faced with near term competition, when buyout offers aren't successful, incumbent sole source contractors move quickly to streamline their operations to meet the pending challenge. We reap the benefits of this change in corporate culture before the second source is on line. Therefore, contending that competition is not effective from the outset of the program is simply contrary to the demonstrated behavior of our competitive industries.

The affects of dual source competition are real. As noted, the Navy repeatedly sees the benefits of competition from the outset of the dual source decision. The STANDARD MISSILE (TAB A) and TOMAHAWK (TAB B) programs show the results that can occur when dual sourcing is introduced into historically sole source

programs. The dual source competition for the MK-104 rocket motor demonstrates that similar results that can be achieved in a non-traditional area with a carefully implemented acquisition strategy (TAB C). In none of these cases was an algorithm available upon which to effectively quantify what experience has now taught us are the proper factors to consider prior to initiating a dual source program. The Navy, therefore, relied on its business judgment in deciding to pursue second sourcing in these programs. The savings in dollars, the increase in contractor productivity and the increase in product quality as a result of dual sourcing confirm the wisdom of these decisions. Had the Navy accepted the last gasp buyout offers of the incumbent contractors as suggested in the DoDIG report or put off competition until all uncertainties were resolved, these savings would not have been realized.

The DODIG also asserts that split awards are not competitive. When the government solicits a 0-100% split in requirements, both the letter and spirit of price competition as envisioned in the Truth in Negotiation Act are met. From this it follows that any award "based on" the 0-100% pricing split also meets the requirement of adequate price competition. Since Congress intends that dual sourcing be woven into the fabric of our procurement process, and since any scheme of competitive contracting will result in different prices unless there is collusion among the offerors, Congress was aware that there would be some premium to maintain dual sources of supply. However, the Congress also recognized that this premium was a small price to pay to avoid the discredited policy of "all or none" awards that were inevitably followed by the high priced, sole source follow-on contracts of the past. It is through awards "based on" a careful review of the competitive prices received at the various quantities offered by dual source contractors that the Navy is able to sustain the competitive bidding that has produced consistent declines in unit prices. By relying on the price analysis techniques such as those outlined in FAR 15.805-2 in evaluating split awards rather than the unnecessary cost analysis suggested by the DODIG, the Navy can assure itself that it is receiving truly competitive prices.

Just as it is clear that there is true price competition in the 0-100% solicitations, competition is also present in other ranges. The analysis of prices received in dual source programs shows that the contractors have competed aggressively, regardless of quantity split. When starting a dual source program, the new competitor can be expected to receive some premium to sustain his manufacturing base until he is on equal footing with the original, sole source manufacturer. In the case of the TOMAHAWK, there was a 13% premium in the first year of competition but only a 7.7% premium the next year, FY86. In FY87, McDonnell Douglas, the second source supplier, actually won the head to head competition with General Dynamics, the former sole source incumbent. Average flyaway unit prices have fallen dramatically, declining from \$2,682,000 in FY85 to \$1,659,000 in FY88.

Similar results are being experienced in other Navy dual source programs such as the STANDARD MISSILE. The STANDARD MISSILE also illustrates the kind of unplanned and non-quantifiable benefits that can result from competition. Raytheon, the second source, was able to be an effective competitor of General Dynamics in head to head competition very quickly after becoming the second source. Due to the knowledge gained as a second source, Raytheon has now been selected to be the lead contractor for the next upgrade of the missile.

Both Congress and various procurement commissions have recognized the value of dual source programs. Page 3 of the report notes that it was the intent of Congress to pursue competition and dual sourcing if it "would increase or maintain competition and would likely result in reduced overall costs..." Obviously, when going from a sole source to a dual source of supply, competition is increased. Therefore, part one of the Congress' stated intent is met. Further, in the DODIG's own words, the dual source strategy should be pursued where it is likely to result in reduced overall costs. Properly, the requirement is not that it "must absolutely result" or "must be proven with mathematical certainty that it will result" in lower costs, only that it is likely to do so. The Congress correctly recognized that dual sourcing was a new area that requires judgment, imagination and flexibility. The projected savings of over \$4.0 billion in just three Navy programs (SSN 688 competition \$650 mil; SM-2 GC&A and MK-104 rocket motor \$392 mil; CG second source \$3.0 bil) confirms the intuition of the Congress. The use of "flawed and grossly overstated the savings available from dual sourcing," to describe the benefits of dual sourcing reflects the apparent mistrust of a competitive marketplace and a misconception of the realities of dual sourcing. Virtually all mature Navy dual source programs are moving down price improvement curves similar to those in TABs A, B and C.

The key Navy programs cited in the report were discussed in-depth with the DoDIG. It was shown that the majority of the objections voiced by the DODIG dealing with start-up factors were overcome in the current and planned programs; that it is Navy policy to normally include 0-100% splits, in all programs and that many programs now contain 0-100% splits; that the 0% award option was exercised in some programs where pricing, although competitive, would have resulted in too high a premium; and that the program savings compared to the budget were real savings, not paper savings. Contrary to the implications of the report, before any award is made at split quantities, Navy PCO's ensure that the price of the second source is fair and reasonable, considering all of the economic and business factors present.

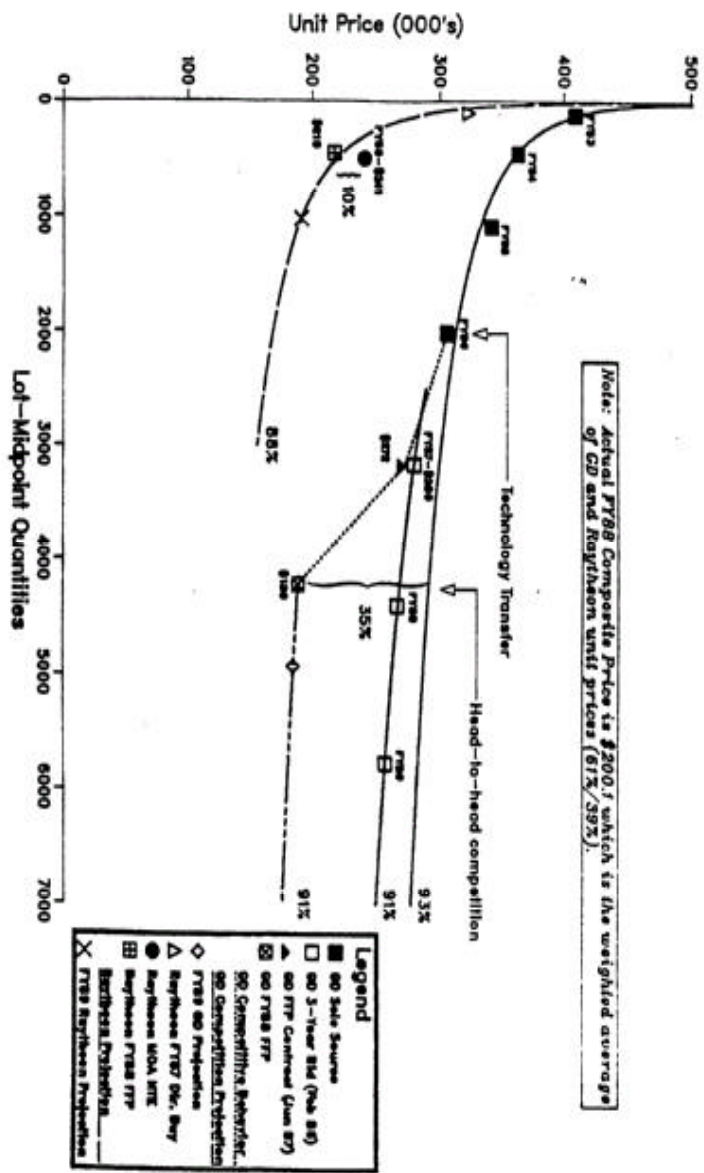
Finally, to imply as the DODIG does that dual source savings merely represent inflated budgets is wrong for two reasons. First, each budget is carefully developed based on past and

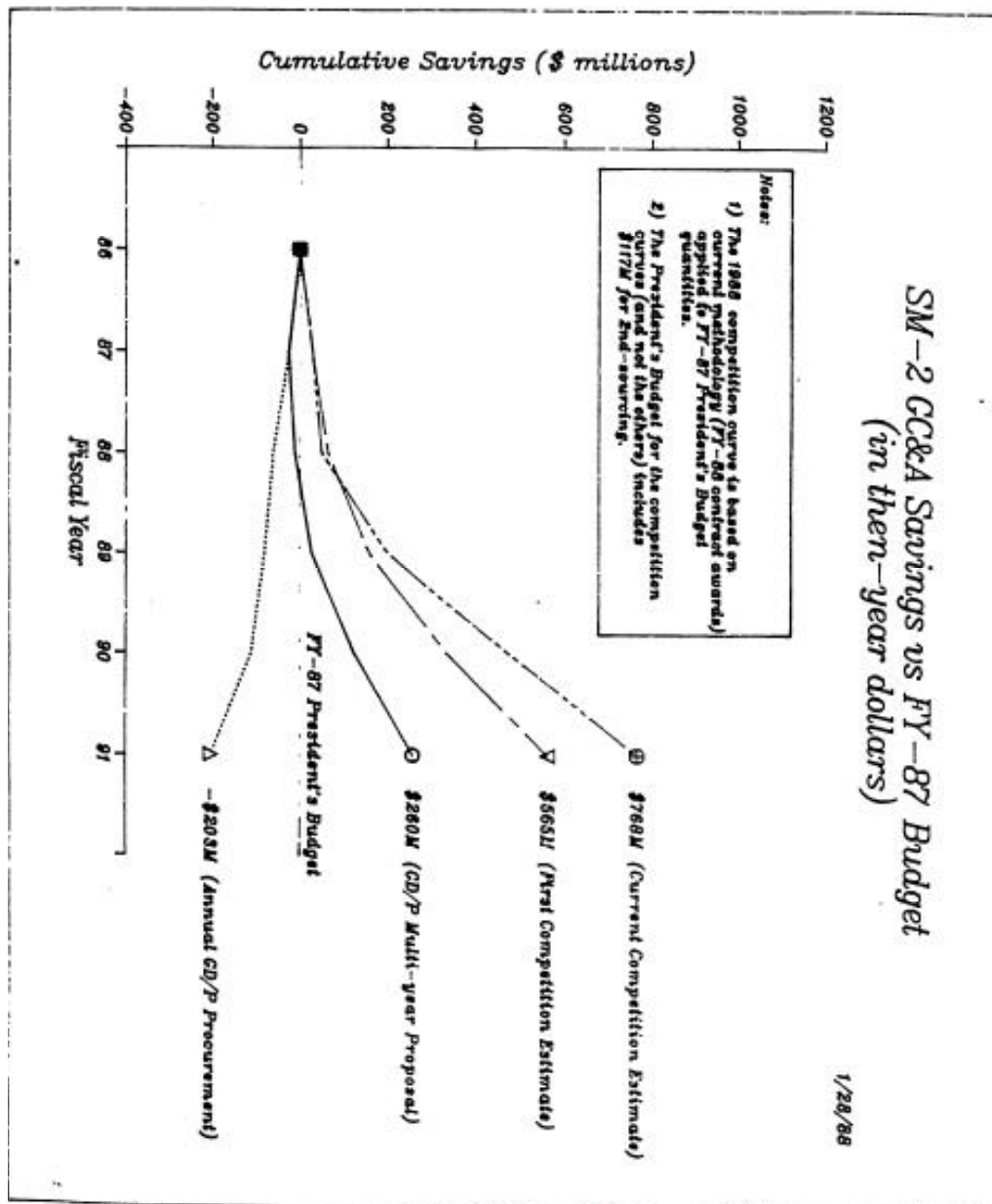
projected experience in dealing with the sole source contractor, including the amount of sub-contractor competition that is anticipated, projected savings from moving down learning curves and savings from other planned productive efficiencies.

Second, after developing the budget, the program office must defend it through the POM process. Unless the DoDIG is contending that they alone are able to objectively develop and understand what makes up a realistic budget, the POM process can be relied upon to squeeze out needless expenses as each program competes for inclusion in the DoD budget. Budgets submitted to Congress are DoD's best estimate of program costs based on past experience and current projections and, therefore, are an accurate base for projecting savings from dual source programs.

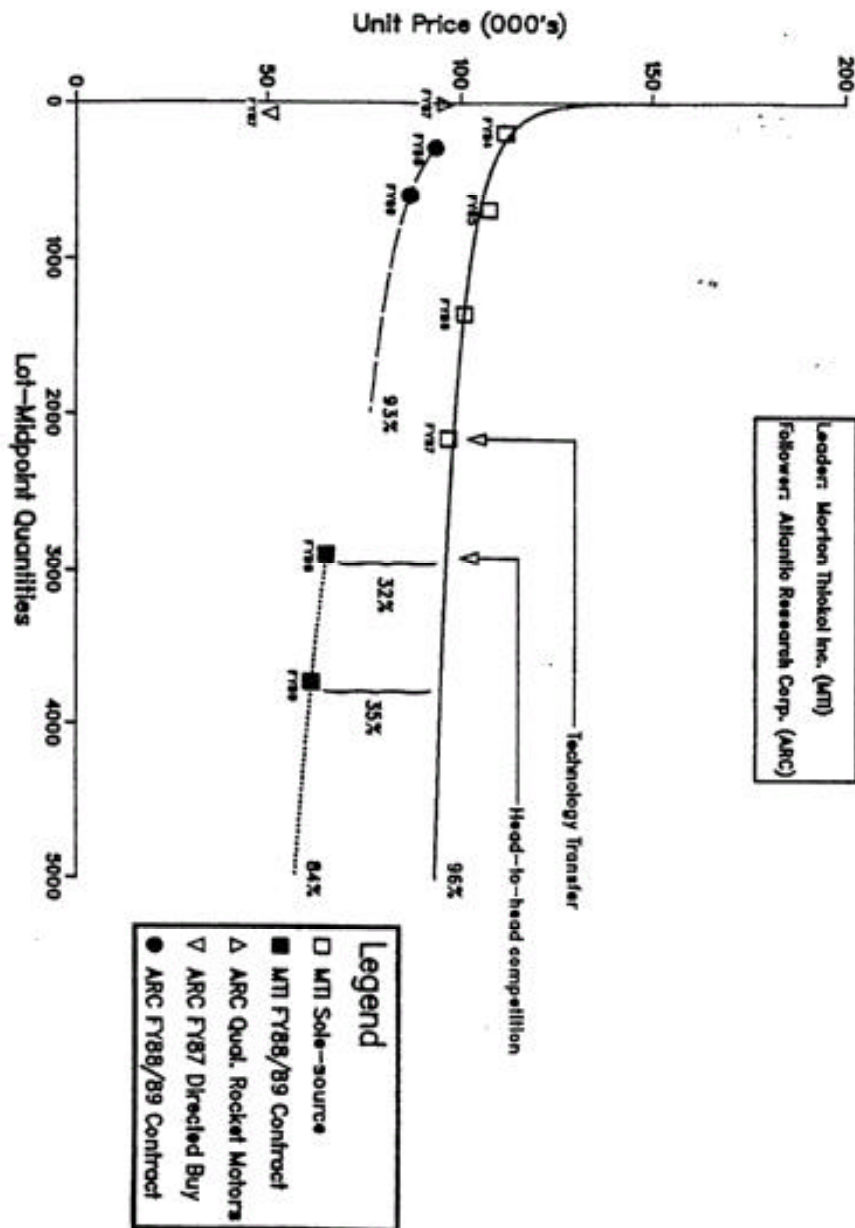
In determining the value of second sourcing, we must not lose sight that we are dealing with attempts to reduce overall program costs. History has taught us that we can and should expect savings in a competitive environment. Dual sourcing of major programs has taken this one step further and demonstrated that our past projections of savings when moving from a sole source environment are understated. The competitive dual sourcing of major programs, not cost and pricing data, continues to be the Navy's best negotiator.

RESULTS OF SM-2 BLOCK II FY88 COMPETITION **GC&A UNIT PRICES** (In Thousands of FY88 Constant Dollars)

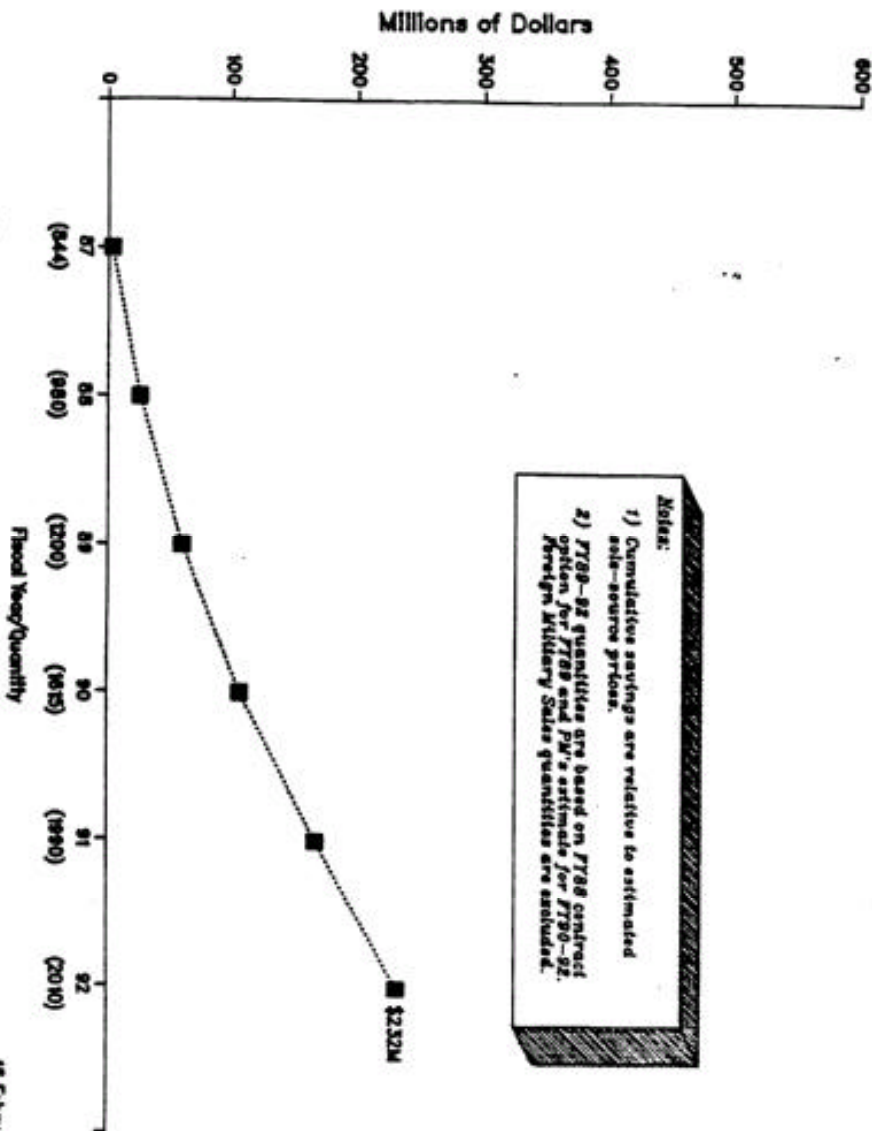




RESULTS OF FY88 MK-104 ROCKET MOTOR COMPETITION (In Thousands of FY88 Constant Dollars)



MK-104 ROCKET MOTOR **ESTIMATED CUMULATIVE SAVINGS DUE TO COMPETITION** **(In Millions of FY88 Constant Dollars)**



Notes:
 1) Cumulative savings are relative to estimated
 sole-source prices.
 2) FY88-92 quantities are based on FY88 contract
 option for FY88 and PW's estimate for FY90-92.
 Foreign Military Sales quantities are excluded.

16 February 1988



DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330-1000

March 28, 1988

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING OFFICE OF
THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

SUBJECT: Draft Report on the Audit of Dual-Source Procurement
Techniques (Project No. 6CD-036) - INFORMATION MEMORANDUM

This is in reply to your memorandum for the Comptroller of the Air Force requesting comments on the findings and recommendations made in the subject report. Our comments are provided at Attachment 1.

The objective of the report as stated on page 4 of the draft 2 was "to determine whether dual-sourcing procedures were achieving an increased level of competition in the DOD procurement process." We were pleased to note that the audit found the use of dual-sourcing competition does, lead to lower unit costs compared to sole-source acquisitions.

As an example, for the Peacekeeper Third Generation Gyroscope (TGG), the FY 84 sole-source unit price was reduced from \$408,626 to an average dual-sourced unit price of \$287,321 in FY 85. Further, a TGG winner-take-all competition in FY 86 resulted in a unit price of \$129,999 being offered by the winning contractor. Likewise, we observed a similar reduction in unit price when we introduced dual-source competition for the Peacekeeper Reentry Vehicle (RV) beginning in FY 85. The sole source unit price of \$358,408 in FY 84 has been reduced to an average dual-sourced unit price of \$239,468 in FY 88.

We are concerned, however, that the report's focus is not on the stated objective of the audit, but on whether dual-source awards (i.e., split awards) can ever be based on adequate price competition. The report's conclusion appears to be no. Hence, the report recommends that the Services should obtain certified cost and pricing data and include the defective pricing recovery clause. While the DOD/IG's sample survey could lead the uninitiated to that + conclusion, we reject the audit's assumption that adequate price competition cannot exist in a dual-source competition.

We do agree that split awards may be subject to "gaming" such that a contractor could utilize some pricing strategy in bidding, at the expense of either the Government or its competition, in

order to maximize its returns. As a result, we believe that cost and pricing data is necessary on some dual-source acquisitions. However, the depth of cost and pricing data needed and its certification must be decided on a case-by-case basis by the contracting officer. At the point of RFP issuance, the contracting officer must decide whether adequate price competition is expected. Upon receipt of the best and final offers, the contracting officer must have the latitude to confirm if adequate price competition exists. If it does, then certification should not be required. Further, requiring certified cost and pricing data for all dual-source acquisitions unnecessarily leads to increased procurement lead time, increases contractor proposal preparation costs, and wastes both contractor and government resources in cases where cost and pricing data is clearly inappropriate. However, additional DFARS guidance may be appropriate to assist the contracting officer in determining when and under what circumstances adequate price competition is likely to exist.

The report also alleges that the methods used to justify investments in dual-source acquisitions "were flawed and grossly overstated the savings to the Government." While the early cost-benefit analysis (CBA) models or procedures may not have considered all the factors needed to adequately address cost-effectiveness, dual-source savings are real and represent a cost savings to the Government.

The current dual-source CBA model, developed by the Defense Systems Management College (DSMC) and used extensively by Air Force Systems Command, appears to address the concerns raised in the audit report. For instance, the model does take into consideration learning curves, time value of money, nonrecurring costs, inflation and other factors to determine whether dual-sourcing is an appropriate acquisition strategy. The Ballistic Missile Office used this model to recalculate the projected savings for the Peacekeeper's Reentry Vehicle using updated information. It still resulted in a \$12.5M calculated savings for the FY 85 and 86 buys (versus the \$58.5M stated in the report which was based on a very simplistic calculation which did not take into consideration many of the factors that are built-in to the DSMC model).

The DSMC model has also been used to justify waivers to 10 U.S.C 2438 that require dual-sourcing of major defense acquisition programs unless a waiver is approved by the Secretary of Defense. For example, the DSMC CBA model demonstrated that it would not be cost-effective to dual-source the SRAM II and ATARS full-scale development and production programs at the system level. Rather the analyses supported dual-sourcing at the subsystem level during production in both cases. These analyses were extensively reviewed within OSD prior to the Secretary of Defense approving the dual-source strategies for these two programs and approving the required waivers.

We will, however, validate the DSMC CBA model to ensure it meets the intent of the DOD/IG's recommendation to establish procedures for calculating investment costs and perform CBA before and after the dual-source decision is made.

In summary, the audit report substantiates that the dual-source technique can lead to lower unit costs. We concur that additional policy is needed to assist the contracting officer to determine when adequate price competition is likely to exist. We do not agree, however, to take this determination out of the hands of the contracting officer by requiring in all cases certified cost and pricing data to be obtained. Finally, we agree that additional policy is required for calculating investment costs and performing CBA before and after the dual-source decision is made.

DANIEL S. RAK
Deputy Assistant Secretary
(Acquisition Management & Policy)

1 Atch
Air Force Comments

AIR FORCE COMMENTS
ON
DOD(IG) PROJECT NO. 6CD-036

Finding A: Determination of Adequate Price Competition

Air Force Comments: The audit report's survey of dual-source acquisitions may support the finding that "Dual-source procurement usually did not result in adequate price competition as defined in Federal Acquisition Regulation 15.804.3." However, we reject the assumption that adequate price competition can never occur when splitting awards. Through careful use of price analysis techniques and a firm grasp of the technique being used to determine the split, the contracting officer can detect when adequate price competition is not present.

Recommendations:

1. Instruct the Services to obtain certified cost or pricing data and include the defective pricing recovery clause in all pricing actions where the award may be split between the offerors.

Air Force Comments: Nonconcur. While we believe that cost and pricing data is necessary on some dual-source acquisitions, the depth of cost and pricing data needed and its certification must be decided on a case-by-case basis by the contracting officer. At the point of REP issuance, the contracting officer must decide whether adequate price competition is expected. Upon receipt of the best and final offers, the contracting officer must have the latitude to confirm if adequate price competition exists. If it does, then certification should not be required. Further, requiring certified cost and pricing data for all dual-source acquisitions unnecessarily leads to increased procurement lead time, increases contractor proposal preparation costs, and wastes both contractor and government resources in cases where cost and pricing data is clearly inappropriate.

2. Expand the Defense Federal Acquisition Regulation Part 17, to include a special subpart clarifying the policy and guidance to be used when soliciting and awarding contracts for dual-source acquisitions.

Air Force Comments: Concur. Additional DFARS guidance is appropriate to assist the contracting officer in determining when and under what circumstances adequate price competition is likely to exist. Part 15 should be expanded to address factors that must be considered in a dual-source acquisition in order to determine whether or not adequate price competition exists.

Finding B: Cost-Effectiveness of Dual-Sourcing

Air Force Comments: Concur. This finding stated that the Military Departments used methods to justify investments in dual-source acquisitions that "were flawed and grossly overstated the savings to the Government." This resulted from a lack of standard policy and guidance on how to perform cost-benefit analysis.

In this area, the audit addressed one Air Force program, the Peace-keeper's Reentry Vehicle (RV) (FY 85 and 86 buys). The audit concluded that the methodology used to calculate savings was flawed because price reductions due to economy of scale and learning were not considered. The audit also indicated the Air Force did not offset investment costs, time value of money, and premium payments against the anticipated savings. The Ballistic Missile Office (BMO) agrees that learning and the time value of money were not considered. However, investment costs were considered. BMO recalculated the anticipated savings for the RV using the Defense Systems Management College (DSMC) cost-benefit analysis (CBA) model and determined that there would still be a \$12.5M savings after considering all the factors necessary to make a cost-effectiveness determination.

Recommendation:

We recommend the Assistant Secretary of Defense (Production and Logistics) issue a dual-source policy directive that establishes standard procedures for calculating investment costs and performing cost-benefit analyses before and after the dual-source decision is made.

Air Force Comments: Concur. Early CBA models or procedures used by the Air Force may not have taken into consideration all the factors necessary to determine the cost-effectiveness of dual-sourcing (e.g., learning curve, time value of money). However, Air Force Systems Command is currently using the DSMC CBA model which includes the factors noted by the DOD(IG) as being absent in the earlier CBA models or procedures used to calculate the RV savings. In addition, the Air Force has used this model to support waivers to the requirement to dual source under 10 U.S.C. 2438 for the Short Range Attack Missile II and the Advanced Tactical Air Reconnaissance Systems programs. The analyses supporting the waivers, which were approved by the Secretary of Defense, were closely scrutinized by OSD. The Air Force will validate the DSMC CEA model to ensure it meets the intent of the recommendation.

ADDITIONAL DOD AND NAVY COMMENTS
NOT DIRECTLY RELATED TO THE REPORT FINDINGS

The Assistant Secretary of Defense (Production and Logistics) and the Under Secretary of the Navy made additional comments which were not directly related to the issues discussed in this report. These comments are dealt with in the following sections.

MANAGEMENT COMMENTS

The Assistant Secretary of Defense (Production and Logistics) stated that the report attempted to determine if there were savings from dual sourcing on an annual basis. The Assistant Secretary also expressed concerns that our audit sample included split-award contracts starting in 1975 while the Competition in Contracting Act was signed in 1984. The Assistant Secretary felt that since programs before 1984 were justified on a different basis (mobilization base, for example), they should not be expected to demonstrate cost savings. The Assistant Secretary noted that it was not uncommon for a dual-sourced program to require several years before a break-even point was realized.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

We disagree with the Assistant Secretary that the report attempted to determine if there were savings from dual sourcing on an annual basis. We attempted to determine if individual contract awards were based on the lowest evaluated price, because that is one criterion for determining if adequate price competition existed. We agree with the Assistant Secretary that some programs in our sample were not originally dual sourced for reasons of cost. Our report notes this. However, we believe that dual-sourced contracts awarded for reasons other than costs should meet the same test for adequate price competition as contracts that were dual sourced for cost reasons. We expect that dual sourcing a program will lead to early year losses in expectation of out year savings. We also expect that at some point in a program's procurement cycle, the program will cross over from those early year losses to the point where there are projected savings. That is why we recommended that cost-benefit analysis be performed at specific points throughout a program's life cycle. Without such analysis and data collection, DoD could be continuing dual sourcing past its beneficial point.

MANAGEMENT COMMENTS

The Under Secretary of the Navy's comments were so extensive that we have extracted what we perceive to be the salient points and will deal with these on an individual basis in the following paragraphs.

The Navy stated that it does not consider the report to be "... an accurate or objective evaluation of the economics and efficiencies which result from this competitive procurement

strategy." This statement apparently flows from another in the comments, which stated that:

The recommendations made and conclusions drawn in the subject report have lost sight of the purpose of the audit. As stated in the opening paragraph, "The overall audit objective was to determine whether dual- source procurement techniques were achieving increased competition leading to greater economics and efficiencies in the procurement process. . .

We have clarified portions of this report and reversed the order of the audit findings as the result of the Navy's comments and similar comments by the Assistant Secretary of Defense (Production and Logistics) and the Air Force. The first finding of this report deals with the lack of concrete evidence that dual sourcing does or does not save money. DoD and the Military Departments do not collect the necessary data to make such an analysis.

The Navy stated that:

It is the Navy's firm belief based on documented results that dual-source procurements result in competitive prices which do not require certified cost or pricing data or defective pricing clauses to protect the Government's interest. By any objective measure including comparison with sole- source budget projections, comparison with sole-source prices and price analysis of the competitive offers, substantial acquisition savings have been achieved. In addition, based on reduced contractor bid and proposal costs, reduced Government effort and time to perform unneeded and burdensome audits, technical evaluations and negotiations or reduced time delays in delivery of equipment to the fleet, the non - acquisition savings of dual-source procurements have been enormous, clearly in the multi-millions of dollars. For the audit report to dwell primarily on the initial added costs, which are more than offset by savings, is a disservice to the aggressive actions of the Navy. .

The documented results, objective measure, and substantial acquisition savings do not exist. Any analysis that claims savings in a particular year but does not offset investment costs is invalid. We gave several examples of these types of "computations" in the report. The Navy did not refute our findings.

The Navy stated that:

Dual sourcing is a long-term strategy designed to overcome the inherent structural deficiencies found in

the sole-source procurement process. The Navy and Congress goal of reduced overall costs in major acquisitions requires a carefully structured and continuing commitment to introducing competition into selected major programs that have a high potential for outyear pay back of initial investments. This report, in focusing on the costs of dual sourcing during a program's infancy and insisting that cost and pricing data is indispensable to the process is a solution in search of a problem.

We agree that dual sourcing is a long-term strategy with a high potential for outyear pay back of initial investments. Nowhere in this report do we state that dual sourcing cannot save money in the long run. Our audit covered programs in their infancy only because dual sourcing is a relatively new procedure and most dual-sourced programs are in their infancy. The programs were randomly selected for review.

The Navy stated that:

Too, the wisdom and effectiveness of dual sourcing cannot be determined by selectively choosing several annual contracts. Rather, any analysis must look at potential savings over the life of those programs which have been dual sourced. Any other analysis is not an accurate reflection of the benefits available to the Government. The Navy did provide data that accurately portrayed the current status of the Navy's dual-source policy to the auditors at the face-to-face meeting. Our view was that your personnel were receptive to the information and that the report would likely be revised substantially. However, no changes were made.

The auditors very carefully listened to the presentations made at those face-to-face meetings. Navy personnel insisted that the years after the audited years were the ones where ". . . the benefits of dual sourcing became evident." We explained to Navy representatives that our review of the savings they reported in previous years showed that the reported savings were grossly overstated. We further explained that we did not have sufficient resources, nor did we see the need, to expand the audit to cover their estimates for later years.

The Navy stated that:

It therefore, relied on its business judgment in deciding to pursue second sourcing in these programs. The savings in dollars, the increase in contractor productivity and the increase in product quality as a result of dual sourcing confirm the wisdom of these decisions. Had the Navy accepted the last gasp buyout offers of the incumbent contractors

as suggested in the DODIG report or put off competition until all uncertainties were resolved, these savings would not have been realized.

The Navy's "business judgment" is what this report questions. We still find little or no support for "the savings in dollars" claimed by the Navy. As we stated earlier the procedures used to compute these savings were faulty. Nowhere in this report do we suggest that the Navy accept "the last gasp buyout offers of the incumbent contractors." We suggest that when one of the contractors involved in a dual-source system makes an offer, in any given year, to sell the whole lot to the Government, that offer must be considered when making a determination of adequate price competition as required by FAR 15.804.3.

The Navy's comments also refer to attached charts in the Standard Missile, the TOMAHAWK, and the MK-104 rocket motor and the fact that prices have decreased over time. The charts refer to buys or systems that were beyond the scope of audit. Although we have not verified the accuracy of the charts, they do seem to indicate a decreasing price. On the other hand, learning curve alone should lead to decreasing prices over time. Decreasing prices is not necessarily an indicator of adequate price competition.

Finally, the Navy stated:

The use of "flawed and grossly overstated the savings available from dual sourcing," to describe the benefits of dual sourcing reflects the apparent mistrust of a competitive marketplace and a misconception of the realities of dual sourcing. Virtually all mature Navy dual-source programs are moving down price improvement curves similar to those in TABs A, B, and C.

The key Navy programs cited in the report were discussed in-depth with the DoDIG. It was shown that the majority of the objections voiced by the DoDIG dealing with start-up factors were overcome in the current and planned programs; that it is Navy policy to normally include 0-100% splits in all programs and that many programs now contain 0-100% splits; that the 0% award option was exercised in some programs where pricing, although competitive, would have resulted in too high a premium; and that the program savings compared to the budget were real savings, not paper savings. Contrary to the implications of the report, before any award is made at split quantities, Navy PCO's ensure that the price of the second source is fair and reasonable, considering all of the economic and business factors present.

Finally, to imply as the DoDIG does that dual-source savings merely represent inflated budgets is wrong. . .

The report states that the methodologies used by the Military Departments to compute the savings from dual sourcing were flawed, not necessarily the procurement techniques. Similarly, we never imply that dual-source savings merely represent inflated budgets. The budget is not the problem. It is the irregular procedures used to develop the number that is compared against the budget figure. This comparison number is not inflated but rather understated and this leads to the overstated savings being claimed.

ACTIVITIES VISITED

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics),
Washington, DC
Assistant Secretary of Defense (Comptroller), Washington, DC
Director, Program Analysis and Evaluation, Washington, DC

Department of the Army

Materiel Command, Alexandria, VA
Aviation Systems Command, St. Louis, MO
Missile Command, Redstone Arsenal, AL
Armament, Munitions and Chemical Command, Dover, NJ
Office of the Deputy Chief of Staff for Logistics, Army
Competition Advocate General, Washington, DC
Assistant Secretary of the Army (Research, Development and
Acquisition), Washington, DC

Department of the Navy

Office of the Assistant Secretary of the Navy (Shipbuilding and
Logistics), Navy Competition Advocate General, Arlington, VA
Naval Air Systems Command, Arlington, VA
Naval Sea Systems Command, Arlington, VA
Cruise Missile Project Office, Arlington, VA
Supervisor of Shipbuilding, New Orleans, LA
Supervisor of Shipbuilding, Seattle, WA
Supervisor of Shipbuilding, Bethesda, ME
Supervisor of Shipbuilding, Pascagoula, MS
Supervisor of Shipbuilding, Long Beach, CA
Naval Center for Cost Analysis, Arlington, VA
Naval Plant Representative Office, McDonnell Douglas Corporation,
St. Louis, MO
Naval Plant Representative Office, United Technologies
Corporation, Sikorsky Aircraft Division, Stratford, CT
Naval Avionics Center, Indianapolis, IN

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Headquarters Air Force Systems Command, Andrews Air Force Base, MD
Aeronautical Systems Division, Wright-Patterson Air Force Base, OH
Armament Division, Eglin Air Force Base, FY
Ballistic Missile Office, Norton Air Force Base, CA
Electronic Systems Division, Hanscom Air Force Base, MA
Space Division, Los Angeles, CA
Air Force Plant Representative Office, Hughes Aircraft Company, El
Segundo, CA
Air Force Plant Representative Office, Hughes Aircraft Company,
Tucson, AZ
Air Force Plant Representative Office, Hughes Aircraft Company,
Canoga Park, CA
Air Force Plant Representative Office, Douglas Aircraft Company,
Long Beach, CA
Air Force Plant Representative Office, Rockwell International
Corporation, El Segundo, CA
Air Force Plant Representative Office, The Boeing Company,
Seattle, WA

Defense Contract Audit Agency

Headquarters, Cameron Station, Alexandria, VA
Resident Office (Raytheon), Andover, MA
Resident Suboffice (Hughes), El Segundo, CA
Resident Office (Rockwell International Corporation),
Los Angeles, CA
Van Nuys Branch Office, Van Nuys, CA
Resident Office (Hughes/El Segundo), Los Angeles, CA
Resident Office (Honeywell, Inc.), Minneapolis, MN
Resident Office (Boeing Company), Seattle, WA
Resident Office (General Dynamics), Camden, AR
Resident Office (Martin Marietta Corporation), Orlando, FY
Resident Office (Honeywell, Inc.), Clearwater, FY
Resident Office (Northrop Corporation), Norwood, MA
Resident Office (Bath Iron Works Corporation), Bath, ME
Resident Office (United Technologies Corporation, Sikorsky
Aircraft Division), Stratford, CT
San Francisco Region, Puget Sound Branch Office, Renton, WA
Resident Suboffice (Todd Pacific Shipyards Corporation),
San Pedro, CA

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Resident Suboffice (Avondale Shipyards, Incorporated),
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Resident Office (Ford Aerospace and Communications Corporation),
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Resident Suboffice (Ingalls Shipbuilding Division,
Litton Industries), Pascagoula, MS
Resident Office (McDonnell Douglas Corporation),
Huntington Beach, CA
Resident Office (General Dynamics, Convair Division),
San Diego, CA
Resident Office (McDonnell Douglas Corporation), St. Louis, MO

Defense Logistics Agency

Defense Contract Administration Service Plant Representative
Office (Raytheon), Burlington, MA
Defense Contract Administration Service Plant Representative
Office (General Dynamics), San Diego, CA
Defense Contract Administration Service Plant Representative
Office (Ford Aerospace and Communications Corporation), Newport
Beach, CA
Defense Contract Administration Service Plant Representative
Office (Allison Gas Turbine Division, General Motors
Corporation), Indianapolis, IN
Defense Contract Administration Services Management Area (Rockwell
International, Collins Government Avionics Division), Cedar
Rapids, IA
Defense Contract Administration Service Plant Representative
Office (Singer, Kearfott Division), Little Falls, NJ
Defense Contract Administration Service Plant Representative
Office (Honeywell Inc.), Minneapolis, MN
Defense Contract Administration Services Management Area (General
Dynamics Corporation), East Camden, AR
Defense Contract Administration Service Plant Representative
Office (Martin Marietta Corporation), Orlando, FL
Defense Contract Administration Services Management Area
(Honeywell, Inc.), Orlando, FL
Defense Contract Administration Services Management Area (Northrop
Corporation), Boston, MA

Contractors

Raytheon Company, Missile Systems Division, Lowell, MA
Hughes Aircraft Company, Missile Systems Group, Canoga Park, CA
Hughes Aircraft Company, Missile Systems Group, Tucson, AZ
Hughes Aircraft Company, Radar Systems Group, El Segundo, CA
Hughes Aircraft Company, Ground Systems Group, Fullerton, CA

ACTIVITIES VISITED (CONT'D)

Contractors (continued)

General Dynamics, Convair Division, San Diego, CA
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Ingalls Shipbuilding Division, Litton Industries,
Pascagoula, MS
Rockwell International Corporation, El Segundo, CA
Ford Aerospace and Communications Corporation, Newport Beach, CA
General Motors Corporation, Allison Gas Turbine Division,
Indianapolis, IN
McDonnell Douglas Corporation, St. Louis, MO Rockwell
International, Collins Government Avionics Division,
Cedar Rapids, IA
The Singer Company, Kearfott Division, Little Falls, NJ
Honeywell, Inc., Hopkins, MN
Boeing Aerospace Company, Seattle, WA
General Dynamics, Camden Operations, Camden, AR
Martin Marietta Corporation, Orlando, FL
Honeywell, Inc., Clearwater, FL
Northrop Corporation, Precision Products Division, Norwood, MA
United Technologies Corporation, Sikorsky Aircraft Division,
Stratford, CT
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Todd Pacific Shipyards Corporation, Los Angeles Division,
San Pedro, CA
Avondale Shipyards, Inc., New Orleans, LA
Douglas Aircraft Company, Long Beach, CA

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Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Senate Ranking Minority Member, Committee on Armed Services
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Ranking Minority Member, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security,
Committee on Government Operations

REPORT OF POTENTIAL BENEFITS

Audit Title: Report on the Audit of Dual-Source Procurement Techniques

Report No. 6CD-036 Date of Draft Report: January 5, 1988

Functional Area: Contract Administration

<u>Recommendation Reference</u>	<u>Description of Benefit</u>	<u>Amount and/or Type of Benefit</u>
A	Economy and Efficiency Provide standards to insure profitable and informed dual source decisions.	Not quantifiable
B1	Compliance with Regulations Provide Truth in Negotiations Act protection when warranted	Not quantifiable
B2	Economy and Efficiency Expand policy and guidance to provide consistent and effective guidance for contracting officers to make cost effective source selections.	Not quantifiable